



Broome
County
Comprehensive
Plan



Final



2013



Broome County Comprehensive Plan

Building our Future

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Broome County Comprehensive Plan

Building our Future

Table of Contents

Introduction	<i>i</i>
Principles	1
Land and Water	
Cultural Resources	4
Housing	16
Land Use	33
Infrastructure	46
Open Space	65
Water Resources	90
People	102
Jobs	
Economic Profile	111
Work Force Profile	136
Target Industry Analysis	160
Real Estate Assessment	190
Incentive Evaluation	207
Economic Development Recommendations	224
Tools	262
The Plan	
Action Plan	271
Implementation Matrix	283
Appendices	



Broome County Comprehensive Plan

Building Our Future

Introduction

The history of Broome County is tied to the ideas and achievements of our residents and the distinctive character of our neighborhoods and pastoral landscapes. A strong work ethic, scenic beauty, and pride in our communities have provided the springboard for successful, home-grown industries and the establishment of close-knit, inviting neighborhoods. However, Broome County has also faced significant challenges as the economy painfully restructured and we endured record breaking floods.

To address these challenges, it is important that we reflect and build upon our rich history and identify new opportunities, such as a vibrant and growing arts and culture community, distinctive urban centers and rural villages, expanding recreational opportunities, and an innovative work force. By leveraging these resources, Broome County can achieve its vision.

A powerful tool in this effort is a comprehensive plan. By preparing a new comprehensive plan, our community has laid out its shared vision and built consensus for public investment and regulatory policies. The plan can be used to protect resources, give validity to local land use decisions, guide infrastructure investments, support grant writing, and foster economic development.

The Steering Committee for this planning process included representatives of higher education, economic development, agriculture, the rural villages and urban centers, and county government. Over the course of the past year, the Steering Committee established a set of principles to guide development of the plan and reviewed all the information that was generated. The Planning Department and our economic development consultants, EM Pemrick, prepared an inventory of current assets, threats, and opportunities. Residents weighed in on this inventory and helped formulate a vision for the community. Finally we prepared an action plan with specific steps to move ourselves from our current state to the proposed vision.

Community involvement was essential during all stages of the process. We listened to residents, business owners and stakeholders about how they view Broome County today. We met with numerous stake holder groups including:

*Greater Binghamton Chamber of Commerce
Local planning and zoning boards
Binghamton University Graduate Students
Broome County Bar Association Municipal
Attorneys Working Group
Broome County Board of Realtors
Broome County Environmental Management
Council
Citizen U.*

*Preservation Association of the Southern Tier
Southern Tier Homebuilders and Remodelers
Susquehanna Heritage Area Commission
Broome County Farm Bureau
Aging Futures Partnership
Livable Communities Alliance
Western Broome Economic Roundtable
Broome County Council on the Arts*



Broome County Comprehensive Plan

Building our Future

Principles

To create an effective comprehensive plan, we gather public input both at face to face meetings and via surveys, analyze reams of economic and demographic data, inventory our physical assets, assess the challenges facing us, determine our desired destination, and then plot a course for the community. Why should we do all this work? Because all successful ventures are based on a plan.

We plan our careers, we plan our retirement, and we even plan our vacations. Businesses need plans to get financing from a bank. Imagine building a house without a plan.

How ‘comprehensive’ is this plan? If we truly took a *comprehensive* approach, this document would be thousands of pages long and take years to prepare. Instead, we chose to focus on those policies and projects that are carried out by County government and our local partners.

In developing the plan, there are certain self-evident principles that will guide our efforts. These common sense ideas were culled from current planning theory and they represent the best practices in the profession today. These are:

The community must be resilient. This community will face environmental and economic challenges, and we need to be able to rebound and respond. These challenges may arise globally, regionally or locally. Some of these challenges have already begun to manifest themselves here in Broome County. This includes a trend of increasing precipitation resulting in more frequent flooding and at higher levels, the impact of globalization on local economic competitiveness, and the increased demand for senior housing and services brought on by the aging of the local population.

Part of the planning process is to assess threats and compare them to the assets we have. The more we understand about the challenges that we expect to face, the better we can prepare. One element of preparation is to encourage diversity. This can include:

- Hosting a mix of employers in a variety of industries will ensure that we better weather economic storms
- Providing a diversity of housing options will allow us to respond to evolving demands



Broome County Comprehensive Plan

Building our Future

- Having a range of transportation choices will allow us to adapt to changing energy supplies and land use patterns in a fiscally conservative manner

Communities that are ‘company towns’ have a large percentage of their economic base held by one employer and are vulnerable to downturns for that business. We saw that to some degree with the downsizing that took place at IBM Endicott in the 1990s. Endicott was the birthplace of one of the largest and most successful firms in the world, but they are now home to just a few thousand ‘IBMers’. This downsizing had a devastating effect on the workforce, suppliers and subcontractors, and the local tax base. It also dealt a major blow to the psyche of the community which saw its identity linked to that of IBM.

Endicott rebounded somewhat when a consortium of local business leaders bought the IBM real estate and created a company (Endicott Interconnect) that now occupies a significant portion of the former IBM campus. Now as Endicott Interconnect pursues exciting new technologies such as thin film solar and advance medical sensing devices, and their sister company Huron Real Estate attempts to lease space in the former IBM campus, the Village of Endicott has a new vitality.

Present needs must be met without compromising our ability to meet future needs. A plan, by its nature, should look to the future. But there are immediate demands on our resources. We need to make sure that any effort or initiative put forth in the plan, can be sustained long term.

Limited resources should be conserved and leveraged. All resources have limits, so it is essential that we maximize the return on our investments. One way to do this is by channeling development into areas where adequate infrastructure already exists. The ultimate limited resource is land, and when land is consumed for development we need to ensure that it is being put to its highest and best use.

Natural and cultural resources should be preserved and enhanced. We are blessed in this community with an abundance of natural and cultural resources. Our rivers (Susquehanna, Chenango, Tioughnioga, Otselic and Delaware) support walking trails, fishing, recreation, and destination tourism. Dozens of local buildings are on the National Register of Historic Places, and these sites add immense value to the community. These resources can be threatened by poor development, or they can attract investment to the County.

Public health and healthy communities should be promoted through planning tools and strategic public investments. As planners, we have tools such as land use reviews that can be used to make communities more walkable, and therefore



Broome County Comprehensive Plan

Building our Future

healthier. In addition, there are public investments made in infrastructure and locating of facilities that can designed to contribute significantly to community sustainability.

Collaboration is key. Many see municipal home rule as an obstacle to countywide planning in New York. And it is true that Broome County's resources and authority are limited. However, the Department of Planning and Economic Development enjoys a good working relationship with the towns and villages. We have prepared the municipal comprehensive plans for many of the Towns and one Village and we work closely with others on a wide variety of issues. For this plan to be successful, we will need to draw on numerous local partners for implementation.



Broome County Comprehensive Plan

Building our Future

The cultural resources of Broome County help create a sense of place, serve as a marketing tool to attract and retain businesses and residents, and generate economic spinoff. For example, it is estimated by Americans for the Arts, that the typical attendee of an arts event spends over \$24 per person for each event *beyond the cost of admission*. For residents of the same county as the event, the figure is \$17 per person, and it is more than double that amount (nearly \$40) for each non-local attendee. Spending on meals, snacks, and refreshments is the largest single expense of attendees at arts events.

Historic and Cultural Preservation

There is inherent value in our historic resources. They can encourage sound development practices that respect and enhance the urban and rural character of our region. Over 84% of the respondents to the comprehensive plan survey thought that preserving our cultural and architectural heritage was a major (44%) or minor (40%) opportunity. Broome County has a diverse and nationally significant cultural and architectural heritage that has been recognized through various programs and initiatives for decades. In 1976, as a bi-centennial tribute, the City of Binghamton enacted legislation for a Commission on Architecture and Urban Design to support and encourage recognition and preservation of significant historic sites and structures. Several important structures were individually listed on the National and State Historic Registers that included the Broome County Courthouse, Roberson Mansion, First Presbyterian Church, Christ Church, South Washington Street Bridge and others. Eventually this commission established design review procedures for deliberating on any designated landmark or public property proposal within the city.

From the Susquehanna Heritage Area Management Plan Update: The natural resources of the Susquehanna Heritage Area form the backdrop and underpinning of human civilization of this region. Residents of the past two centuries altered and sought to tame this landscape to support their needs and interests. A quiet agricultural region eventually gave way to a network of cities and towns connected by roads and rail lines. Though human occupation of the past 200 years has often been at odds with the natural features of the landscape, progress has been made in preserving and conserving areas of unspoiled forest, significant natural beauty, and valuable habitats for native species.

For millennia prior to non-Native settlement, Native Americans lived in and traveled through this region, leaving behind artifacts as evidence of their presence. The most recent Native American civilization was the Iroquois Confederacy. Their concept of land ownership and use of resources were highly attuned to the natural world and completely foreign to European settlers. Europeans initially came as missionaries, followed closely by traders, who continued to inhabit the region until well past the end of the American Revolution. As contact with adjacent European settlers increased and the region plunged into war, sharp conflicts arose over land ownership that led to bloodshed on both sides.

Industry has played an important role within the Susquehanna Heritage Area region since the mid-1800's. Small-scale, localized early mills and lumbering operations gave way to concentrated, large scale manufacturing and mass production after the Civil War. The jobs and prosperity brought by industrial concerns created much of the built environment visible in riverfront communities today: grand public buildings, industrial complexes, ornate commercial and office buildings, streets of fine mansions, immigrant enclaves, and neighborhoods created as company towns. The twentieth century saw the merging of companies to form larger conglomerates and the rise of numerous innovative technology companies in the region.



Broome County Comprehensive Plan

Building our Future

During the 1980's Historic Districts were established in Broome County. Historic districts acknowledge a group of buildings and properties that have historic or architectural significance. According to the National Register of Historic Places, a historic district is a defined area, "possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development." National Register Historic District designation does not create any property restrictions and the only property protections are limited to actions involving a federal or state government or agency.

Within Broome County there are seven designated National Register Historic Districts. The seven districts are all focused along the primary river corridor where a vast majority of the historic resources in the region are concentrated. The National Register Historic Districts represent a range of architectural styles, time periods, historical themes, and areas of significance. They are as follows:

- The Abel Bennett Tract Historic District in Binghamton is the most recent district addition within the County, listed in February 2008. The district is recognized as an example of a late nineteenth to early twentieth century residential subdivision.
- The Court Street Historic District in Binghamton encompasses 33 acres and includes 87 buildings, including Courthouse Square. This district represents significant civic and commercial architectural styles and trends from 1825-1949.
- The Railroad Terminal Historic District in Chenango Street and North/South Depot Street area of Binghamton includes 19 buildings representing the period between 1875 and 1949. The buildings reflect the City's history associated with transportation and industry.
- The State Street-Henry Street Historic District, also in Binghamton, encompasses seven acres and includes 20 buildings. The district includes a Federal Courthouse and Post Office, as well as an arts district and vernacular early twentieth century commercial structures.
- The Cyrus Gates Homestead Historic District in the town of Maine includes 1,300 acres and seven buildings. The farmstead is historically significant from the perspectives of social history, architecture, and agriculture.
- The Windsor Village Historic District is in the heart of the Village of Windsor and includes 70 buildings and 1 structure, covering over 550 acres. The





Broome County Comprehensive Plan

Building our Future

significance of the district is related to architecture, exploration, and settlement from 1800 through 1924.

- The newest district, approved in 2011, is the Village of Johnson City Historic District. The district is generally bounded by Corliss Avenue, Arch Street, Main Street, Lester Avenue and Helen Drive.

In addition, there is one thematic National Register District in Broome County. Although not geographically defined like the national historic districts listed above, the six carousels in the Triple Cities are listed as a thematic National Register Historic District.

Themes of the Susquehanna Heritage Area:

1. Natural Resources and Harnessing Nature

- Hills, Valleys and Waterways: The Topographical Landscape
- Impact Upon the Land
- The Early Agricultural Landscape
- From Mixed Farming to Specialization
- Scenic and Natural Beauty: The Emerging Conservation Ethic

2. Native Americans in the Upper Susquehanna

- Remains of a Lost Civilization: Archaic to Woodland
- Preserving a Stronghold: The Iroquois Confederacy
- Joseph Brant and the Revolution
- Post-Revolutionary Frontier

3. Valley of Opportunity

- The Early Forest Industries
- Rise of the Factory Economy
- The World Comes to Work
- Welfare Capitalism and Labor Practices
- Valley of Innovation
- Challenges of a Changing World

In addition to the six National Register Historic Districts, and the one thematic National Register Historic District, there are three active locally designated historic districts in the City of Binghamton. They are Court Street, State and Henry and the Rail Terminal District. Locally designated historic districts can provide the greatest level of legal protection for historic properties as land use decisions in New York State are made at the local level. As a result, local historic district designation can also be the most difficult designation to garner public support, as some property owners are resistant to accepting any additional requirements or restrictions on their property, even for the sake of community and building preservation.

There is one State registered district in the County. The Rivercrest Historic District in Vestal was approved for state registry designation in 2009. It includes 28 houses along Vestal Parkway that remain from a planned community developed in the 1930s.

Beginning in 1979, the New York State Urban Cultural Park Program (now called Heritage Areas) also began to establish local districts and historic preservation



Broome County Comprehensive Plan

Building our Future

ordinances in Johnson City and Endicott. Hundreds of sites were recognized as within local districts in Binghamton, Johnson City and Endicott and many individual sites were cited as primary resources that contributed to the community and industrial heritage of our county.

The Susquehanna Heritage Area extends beyond preservation of historically significant buildings and neighborhoods. The Susquehanna Heritage Area program is a regional strategy to enhance historic communities and landscapes while encouraging economic development. From the recently completed Susquehanna Heritage Area Management Plan Amendment, “The goal of the Susquehanna Heritage Area is to use the historic, cultural and natural resources of Broome and Tioga Counties to strengthen regional identity, enhance local quality-of-life, support the local economy, and promote stewardship. This goal is achieved through the partnership and coordinated activities of a wide range of local and regional organizations with technical support from the New York State Heritage Area Program.” The Susquehanna Heritage Area Commission seeks to achieve this goal through six interrelated efforts: 1) Preservation, 2) Education, 3) Recreation, 4) Revitalization, 5) Marketing and 6) Partnerships.

In 2011, the New York State legislature signed into law an expansion of the original Susquehanna Heritage Area to include all of Broome and Tioga Counties. The benefits to communities that participate in the program include New York State grant eligibility, technical assistance for projects that address the program goals, and regional marketing of community assets that support businesses, organizations, public facilities and attractions.

The Susquehanna Heritage Area recognizes a wide variety of resources found in each community that reflect the region’s inherent qualities such as its primary destinations, historic museums and societies, galleries and performing arts venues, agri-tourism sites and the abundant passive and active recreational opportunities in local, county and state public lands.

In the City of Binghamton all site plan approval applications for parcels within an historic district and for identified resources within the 1996 Urban Cultural Park boundaries are required to be reviewed by the City of Binghamton Commission on Architecture and Urban Design. The City of Binghamton is also a Certified Local Government community.

In 2010, the Vestal Town Board approved a Historic Preservation Ordinance for the Town of Vestal and the establishment of a Historic Preservation Commission. In 2011, a preservation consultant was hired by the Town to complete a town-wide



Broome County Comprehensive Plan

Building our Future

Reconnaissance Level Historic Resources Survey. The survey identified 20 properties and 1 district as eligible for listing on the State and National Register of Historic Places. As of 2012, Vestal has a number of local landmarks and State and National Register properties. Vestal became a Certified Local Government in 2011. Pursuant to this designation, the Vestal Historic Preservation Commission reviews Certificates of Appropriateness for all properties.

Individual Historic Buildings, Structures, and Sites

Within Broome County there are 42 individual listings on the National Register of Historic Places. The National Register of Historic Places is the official list of the nation's historic buildings, sites, structures, and objects that are considered worth preserving. It is intended as one tool to assist in the coordination and support of public and private efforts to identify, evaluate, and protect America's historic resources. The National Register list provides a solid baseline for identifying key, priority historic resources within the County that may be of interest to visitors.

There are National Register listed buildings and sites throughout the Broome County, with the greatest concentration in the City of Binghamton. In addition to nationally designated historic sites, a thorough inventory of historic resources, both nationally and locally significant, was conducted for the City of Binghamton, Village of Endicott, and Village of Johnson City in association with the original Susquehanna Urban Cultural Park (now Heritage Area) Management Plan and its 1996 update. The 1996 Management Plan identified a total of 129 historic resources in the City of Binghamton (58 resources), Village of Johnson City (42 resources), and Village of Endicott (29 resources). Johnson City does have a local historic preservation ordinance that allows for local historic designations as well as review of projects, but only a few individual resources have been officially designated.

The list of buildings and sites inventoried to date is not fixed. Communities, individuals, and groups throughout the community are consistently striving to add resources to the National Register and to existing and proposed historic districts. Only a small portion of the County has been surveyed and there are a large number





of historical resources that may still be identified.

Historic properties that are publicly owned, or held by a non-profit, are eligible for State and Federal grants for restoration. For-profit entities that own historic properties are eligible for potentially lucrative Federal and State Historic tax credits. In addition, homeowners can now use state tax credits for property rehabilitation if it is listed on the National Register, or is a contributing site in a National Register historic district, and located within a distressed census tract.

Nationwide, tax credits are being used to make historic preservation financially feasible on large scale investments and smaller mixed used developments. To make it easier to access these credits, Broome County completed a Multiple Resource Survey on the industrial properties in Broome County in 2012. This survey work can be used by property owners wishing to apply for historic tax credits.

Community Facilities

Broome County is fortunate to have a wealth of community and cultural facilities and institutions. One of the primary strengths of the area cited by the Broome County Arts Council during their stakeholder meeting was the quality of the performing arts in this area. Some facilities are considered primary destinations because they draw people from outside the region, are visitor-ready in terms of having regular, seasonal or event-specific posted hours of operation and have some level of guest amenities. These primary destinations are:

- **Museums and Cultural Attractions**

Binghamton Zoo at Ross Park: The Binghamton Zoo at Ross Park is located on 90 acres of land on Morgan Road in the City of Binghamton. The zoo opened in 1875, making it the 5th oldest zoo in the nation. The zoo is only open seasonally from April through October and offers education programs, guided tours and events all year by appointment.

Roberson Museum & Science Center: Roberson Museum and Science Center is located at 30 Front Street in the city of Binghamton. Roberson Museum and Science Center is an accredited museum under both the American Association of Museums and the Association of American Science and Technology Centers. The museum campus houses the restored Roberson Mansion, the Decker Life Science Center, a modern pottery studio known as Clayworks, the restored mansion across Front Street known as the Decker Arts and Cultural Center, the Binghamton Visitor Center and a digital planetarium.



Broome County Comprehensive Plan

Building our Future

Kopernik Observatory & Science Center: The Kopernik Observatory & Science Center opened in 1974 to commemorate the 500th anniversary of the birth of Mikolaj Kopernik, the man known to the world as Copernicus. The facility is located on Underwood Road in Vestal. Kopernik is the first science laboratory facility in New York State designed for K-12 teachers, students, and their families. Its mission is to offer hands-on learning and exploration using advanced astronomical equipment.

Discovery Center of the Southern Tier: The Discovery Center of the Southern Tier is located in Ross Park in the City of Binghamton. The Discovery Center was established to develop and promote the well-being of children in the Southern Tier through participatory programming. It is a hands-on interactive museum for children and family.

Historic Carousels: One of the best known attractions of Broome County are the six hand carved carousels that continue to operate for free each summer. Donated by George F. Johnson between 1919 and 1934, the carousels attract visitors from the region and across the country. The carousels are located in parks in Binghamton, Johnson City, Endicott and the town of Union .

- Recreational Facilities

Chenango Valley State Park: Chenango Valley State Park is the only state park in Broome County. Located in the town of Fenton, the park is over 950 acres and has 185 campsites, 24 cabins, an 18-hole golf course, picnicking, fishing, boat rentals, trails, biking, and cross country skiing.

Otsiningo Park: Otsiningo Park was built by the New York State Department of Transportation and improved and maintained by Broome County Parks. The park has 7.3 miles of walking/biking trails, community gardens, playgrounds, softball, soccer and volleyball. The park is heavily attended, with approximately 1.5 million visits per year. Otsiningo is host to the annual Spiedie Fest and Balloon rally which brings approximately 100,000 paying visitors to the park.

- Performing Arts and Major Event Venues

Broome County Forum: The Broome County Forum Theatre is a restored vaudeville house that is the home to the Binghamton Philharmonic Orchestra's Pops Series, the Tri-Cities Opera, and the Broadway Theatre League. The theater



Broome County Comprehensive Plan

Building our Future

has 1,527 seats and is located at 236 Washington Street in downtown Binghamton.

Anderson Center for the Arts: The Anderson Center for the Arts is a complex of three theaters on the campus of Binghamton University. The Watters Theater holds 558, and the Chamber Hall seats 408. The largest theater in the center is the Osterhout Concert Theater. The rear wall of the Osterhout is a retractable glass panel wall that can be opened onto an outdoor amphitheater extension. Indoors, this theater holds 1,170 with an additional 1,500 open-air seats when the rear wall is retracted. The Anderson Center was opened in 1985.

Veteran's Memorial Arena: The Broome County Veterans Memorial Arena is a 5,000 seat arena when configured for hockey, and this can grow to 7,000 with the floor seating in place. It was built in 1973 as a result of a nationwide design competition, and has served as a venue for a wide variety of sporting events, trade shows, concerts and community events. The Arena is now home to the Binghamton Senators of the American Hockey League.

NYSEG Stadium: NYSEG Stadium is a dedicated baseball stadium located in downtown Binghamton. The park is the home field of the Binghamton Mets of the double-A Eastern League. The ballpark opened in 1992 and has a seating capacity of 6,012 fans. The seating is divided into box seats, reserved grandstands, and six luxury boxes. The stadium was known as simply Binghamton Municipal Stadium for its first nine years of existence, but in 2001, the naming rights were sold to the New York State Electric and Gas company, a division of Energy East.

Binghamton University Events Center: The Events Center is a multipurpose facility on the Binghamton University campus that hosts everything from banquets and trade fairs to NCAA athletics. Opened in 2004, the Events Center has 156,000 square feet of floor space. Seating ranges from 5,500 for athletic events such as basketball up to 8,000 when the full floor seating is used.

- Susquehanna Heritage Area Visitor Centers

Binghamton Visitor Center: The Binghamton Visitor Center is located on the Front Street campus of the Roberson Museum and Science Center. The Binghamton Visitor Center has interactive computer kiosks, a changing exhibit gallery and a 50-seat theater. The gallery focuses on the industrial development of the region and the architectural, social and cultural heritage of the community. The



Broome County Comprehensive Plan

Building our Future

Binghamton Visitor Center was opened in 1996. Annual visitation is approximately 45,000 on average.

Endicott Visitor Center: The Endicott Visitor Center was opened in 2003 in Old Colonial Hall, a historic building located at 300 Lincoln Avenue in the village. The building functions not only as an orientation point for visitors, but also as a community meeting facility. Annual visitation averages approximately 10,000 people per year.

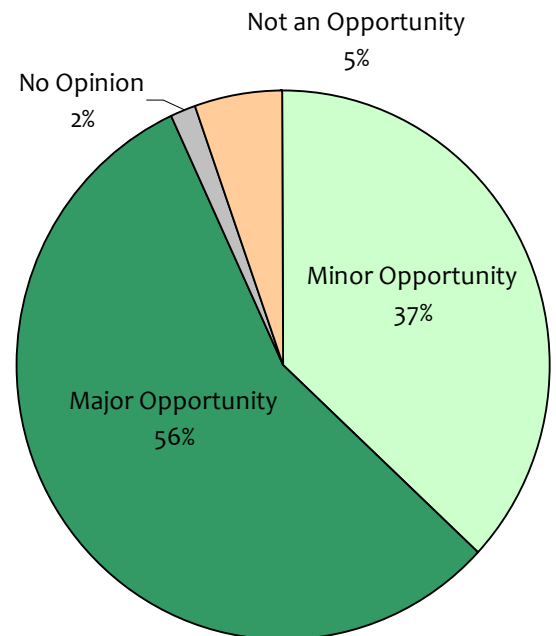
In addition to the primary destinations, there is an abundance of secondary sites that either serve smaller, niche audiences or have not grown enough yet to be a primary destination. These include 25 art galleries, performing arts centers such as the Cider Mill Playhouse, the Endicott Performing Arts Center (EPAC), the Schorr Family Firehouse Stage, Little Theater at Broome Community College and the Know Theater, and museums such as TechWorks! and the Bundy Museum. These facilities are overwhelmingly concentrated in the urban core, but there are notable exceptions in the outlying villages such as Windsor Whip Works (Village of Windsor) and Deposit State Theatre (Village of Deposit).

Several communities in the County have sought to capitalize on the arts and culture for economic development by fostering shopping and cultural districts. By branding and marketing themselves, these areas draw visitors to clusters of small shops, restaurants or galleries. Three of the most successful of these ventures are the State Street Artist's Row in Binghamton, which is the site of a monthly First Friday Art Walk, Little Italy in Endicott which hosts an annual St. Anthony's Feast Day, and the Goodwill Theatre District in Johnson City, a growing collection of performing arts venues, and Binghamton's Clinton Street Antique Row, a mile-long collection of antique shops and second hand furniture dealers. In each of these cases, the host community has provided some level of support through marketing, streetscape improvements, and financial assistance.

Farmers Markets

Broome County residents have a strong interest in farmer's markets and farm stands. On the comprehensive plan survey, 93% of respondents

Preserving Agriculture and Promoting Farm Stands and Farmer's Markets





Broome County Comprehensive Plan

Building our Future

thought that preserving agriculture and promoting farm stands and farmer's markets was a major (56%) or minor (37%) opportunity. There are currently nine small, seasonal farmers markets in Broome County. Six are concentrated in the Triple Cities area, with outlying markets located in the villages of Windsor, Whitney Point, and Deposit. The markets typically open in late May or early June and run through October. Each market has either a one or two-day operating schedule with limited hours of operation. The markets offer a variety of fruits and vegetables, herbs, meat, flowers, homemade soaps and crafts, wines, baked goods, jam, honey, and maple syrup.

In 2009, Broome County Planning hired Market Ventures, Inc., a specialty consulting firm that focuses on public and farmer's markets, to assess the feasibility of a year-round regional farmer's market for this area. The Market Ventures report covered market research of supply and demand, competitive analysis, research into comparable facilities around the country, site selection and design description, recommendation of a management structure, and a financial analysis. Their conclusion was that there is sufficient consumer demand and a large enough pool of interested vendors to make a year round Farmer's Market at Otsiningo Park a success. Their report can be viewed at gobroomecounty.com/planning/pubs Based on this report, Broome County Planning began preparing grant applications to build the facility.

In close collaboration with local farmers, Cornell Cooperative Extension and a representative of the Statewide Association of Farmer's Markets, Broome County Planning engaged Keystone Associates to prepare a conceptual plan for the Farmer's Market in Otsiningo Park. The final conceptual plan calls for 36 vendor slots, a 400 square foot retail store component, and an area that can potentially be used for a commercial kitchen. It will be constructed adjacent to the existing rest rooms in the northern end of Otsiningo Park which formerly served as a NYSDOT rest stop.

Broome County Planning secured a \$400,000 grant from the New York State Office of Parks, Recreation and Historic Preservation towards the cost of construction of the market. Construction is expected to start in 2013. The regional farmer's market will not replace any of the existing seasonal markets except for the one currently operating in Otsiningo Park.

Additional agri-tourism and agri-businesses resources are discussed in 'Working Landscapes'.



Special Events

There are numerous primary and secondary events held throughout the County which honor our heritage and exhibit our recreational assets. The primary events are characterized by being ongoing over a long period of time, have an established place in the calendar, draw tens of thousands of visitors including a substantial number from outside the area, and have a regional and even national name recognition. The primary special events in the County are:

- Dick's Sporting Goods Open: This event is part of the Professional Golf Association (PGA) Champions tour. It is traditionally held in June each year at the En-Joie Golf Course in Endicott, which is part of the legacy of Endicott-Johnson. The Dick's Open has changed over the years from a PGA tournament event to being part of the 'Champions' tour of former PGA golfers aged 50 and over. The Dick's Open now hosts a popular Friday night concert. The organizers do not release attendance figures for the five day of the event.
- Spiedie Fest and Balloon Rally: The annual Spiedie Fest and Balloon rally began as a Spiedie sandwich cooking competition in 1983, and has grown into a primary event which is attended by upwards of 100,000 visitors. The Spiedie Fest has numerous vendors, a large concert and hot air balloon launches over the course of the three day event. It is held annually on a weekend in August at Otsiningo Park, a county-operated park just north of Binghamton.
- Chris Thater Memorial Race: The Broome County STOP-DWI program sponsors an annual bicycle and running event centered around Recreation Park in Binghamton. The Thater races bring in more than 1,000 elite athletes from 20 countries and 30 states. In addition to the competition, the event has bands, exhibits and vendors. Attendance is approximately 10,000.
- Holiday Classic Basketball Tournament: For 20 years, the Holiday Classic Basketball Tournament has promoted an anti-substance abuse and anti-drunk driving message for student athletes. High schools from across the country have sent teams to compete in this 3-day event. The tournament takes place in the week between Christmas and New Year's each year, and attracts approximately 10,000 attendees including athletes. The Holiday Classic is held at the Broome County Veterans Memorial Arena.
- Tournament of Champions: A sister event to the Holiday Classic is the Tournament of Champions. This softball tournament for female athletes has taken place the first week of July each year for over a decade. There are approximately 4,000 attendees, including 700 athletes, for this 3 day event. The Tournament of Champions is held at the County-owned BAGSAI softball complex in the town of Dickinson.



Broome County Comprehensive Plan

Building our Future

In addition to the primary special events, the community hosts a number of smaller events which showcase our cultural and ethnic heritage. These include, the LGT Tennis Challenger, Two Rivers Ethnic Festival, Broome County Fair in Whitney Point, July Fest in Downtown Binghamton, Apple Fest in Endicott, Carousel Days in Johnson City, the Window on the Arts in Windsor, Binghamton Bridge Pedal, the Blues on the Bridge in Binghamton, and the Deposit Lumberjack Festival. These events enjoy varying degrees of support by the local and county government including financial assistance and staff time to aid with organizing the event.



Broome County Comprehensive Plan

Building our Future

A home is often a family's greatest asset and a critical part of the fabric of the community. Housing needs to be safe, affordable, and matched to the needs of the residents. Homes that are inadequate can harbor dangers such as lead based paint and failing mechanical systems. Even units in good repair may not allow for aging residents to remain in their homes as they age.

"In order for communities to function, there must be an adequate supply of housing in proximity to employment, public transportation, and community facilities, such as public schools." - *American Planning Association Policy Guide on Housing*

The local housing stock is under tremendous pressure. Three major floods in the span of 5 years have damaged hundreds of Broome County homes. Changing flood maps and the rising cost of flood insurance threaten whole neighborhoods. And these threats follow on the complete restructuring of the national housing market as a result of the subprime mortgage crisis that began in 2008.

Housing Units

Broome County, the region and the State all saw substantial increases in the number of housing units from 1970 to the present. Delaware County experienced the greatest increase, over 76%, during this period. This is more than 3 times the Broome County increase.

Total Housing Units from 1970 to 2010: State, Region and Counties						
Area	1970	1980	1990	2000	2010	Percent Increase 1970 - 2010
State	6,299,684	6,867,674	7,227,059	7,679,307	8,108,103	28.7%
Region	218,620	257,371	281,867	294,752	307,071	40.5%
Broome	73,371	81,982	87,969	88,817	90,563	23.4%
Chemung	33,051	36,706	37,290	37,745	38,369	16.1%
Chenango	15,427	18,864	22,164	23,890	24,710	60.2%
Delaware	17,734	22,746	27,361	28,952	31,222	76.1%
Schuyler	6,270	7,560	8,472	9,181	9,455	50.8%
Steuben	34,502	40,520	43,019	46,132	48,875	41.7%
Tioga	14,161	17,987	20,254	21,410	22,203	56.8%
Tompkins	24,104	31,006	35,338	38,625	41,674	72.9%

Source: 1970 through 1990 prepared by New York State, Department of Economic Development State Data Center; U.S. Census Bureau: DP-1 Profile of General Demographic Characteristics: 2000, Census 2000 Summary File 1 (SF 1) 100-Percent Data; DP-1 Profile of General Population and Housing Characteristics: 2010, 2010 Demographic Profile Data. Southern Tier East Region Counties and Towns 1940 to 1980. Percentages rounded to the 10th decimal place.



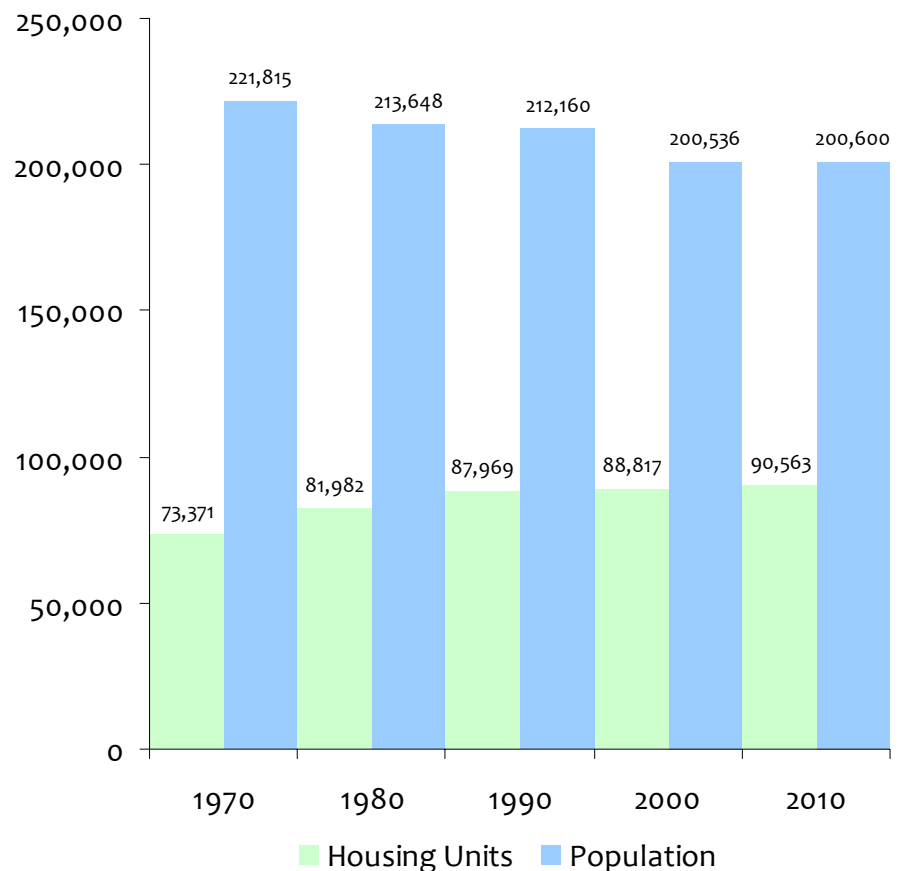
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Building our Future

These remarkable increases, however, came despite stagnant population growth, even declines in some counties, over the same period. As shown on this chart, Broome County lost over 21,000 residents, but added over 17,000 housing units from 1970 to 2010.

What accounts for increasing housing units during a period of population decline? There are a number of factors, the most dramatic of which is the rise in the number of households during this period. In 1970, there were just over 69,000 households in Broome County, and today there are over 82,000 households. As we lost 21,000 residents, we gained over 12,800 households. These households, however, are substantially smaller. In 1970, the average household size was 3.1 persons, and by 2010 this had shrunk 25 percent to just over 2.3 persons. As the community aged, and children have left the area, households increased but household size has decreased.

Broome County Trends in
Population and Housing Units



Housing Type

At the municipal level, the changes in the number of housing units follows a pattern similar to the population changes. The suburban towns such as the portion of Union outside of the villages of Endicott and Johnson City, Vestal and Chenango added the most housing units, and the rural towns such as Triangle and Lisle increased housing units at the fastest rate.



Broome County Comprehensive Plan

Building our Future

Total Housing Units from 1970 to 2010: Broome County Municipalities				
Area	1970	2010	Number	Percent Change
Binghamton-C	23,603	23,842	239	1.0%
Barker-T	592	1,114	522	88.2%
Binghamton-T	1,362	1,985	623	45.7%
Chenango-T	3,673	4,857	1,184	32.2%
Colesville-T	1,372	2,302	930	67.8%
Conklin-T	1,626	2,337	711	43.7%
Dickinson-T	1,172	1,396	224	19.1%
Fenton-T	2,154	2,940	786	36.5%
Kirkwood-T	1,735	2,520	785	45.2%
Lisle-T	460	1,044	584	127.0%
Maine-T	1,659	2,223	564	34.0%
Nanticoke-T	297	651	354	119.2%
Sanford-T	687	1,317	630	91.7%
Triangle-T	361	852	491	136.0%
Union-T	8,890	12,892	4,002	45.0%
Vestal-T	7,069	9,432	2,363	33.4%
Windsor-T	1,590	2,524	934	58.7%
Deposit-V (part)	413	422	9	2.2%
Endicott-V	6,444	6,719	275	4.3%
Johnson City-V	6,694	7,443	749	11.2%
Lisle-V	119	141	22	18.5%
Port Dickinson-V	774	782	8	1.0%
Whitney Point-V	305	411	106	34.8%
Windsor-V	356	417	61	17.1%

As the number and location of housing units has changed, so has the nature of these units. In keeping with the increasing suburban and rural nature of the county, we have more units in single family homes and mobile homes than we did in 1970 and fewer in multi-family buildings. There are more than twice as many mobile homes in Broome County now than in 1970.



Broome County Comprehensive Plan

Building our Future

Housing Units in Structure 1970 to 2010						
Broome County	Single-Family		Multi-Family		Mobile Home	
	No.	Percent	No.	Percent	No.	Percent
1970	42,734	59%	27,764	38%	2,287	3%
2010	56,960	63%	28,704	32%	4,681	5%
Change	14,226	na	940	na	2,394	na

Currently the City of Binghamton has the lowest percentage of single-family units (under 44%). The Town of Binghamton has more than double this percentage, with over 93% of its units in single-family homes. The Town of Nanticoke has the highest percentage of mobile home units (over 38%).

Housing Units in Structure in 2010: Broome County Municipalities							
Area	Total Housing Units	Single-Family		Multi-Family		Mobile Home	
		No.	Percent	No.	Percent	No.	Percent
Broome	90,348	56,960	63.1%	28,704	31.8%	4,681	5.2%
Binghamton-C	24,664	10,800	43.8%	13,795	55.8%	69	0.3%
Barker-T	1,062	812	76.5%	40	3.8%	210	19.8%
Binghamton-T	1,941	1,813	93.4%	115	6.0%	13	0.7%
Chenango-T	4,853	4,028	83.0%	530	11.0%	295	6.1%
Colesville-T	1,881	1,415	75.2%	124	6.6%	342	18.2%
Conklin-T	2,337	1,829	78.3%	217	9.3%	291	12.5%
Dickinson-T	1,787	1,384	77.5%	403	22.5%	0	0.0%
Fenton-T	2,814	1,997	71.0%	185	6.5%	632	22.5%
Kirkwood-T	2,419	1,759	72.7%	553	22.8%	107	4.4%
Lisle-T	1,126	731	65.0%	40	3.6%	355	31.5%
Maine-T	2,162	1,584	73.3%	37	1.7%	541	25.0%
Nanticoke-T	645	377	58.5%	21	3.3%	247	38.3%
Sanford-T	1,707	1,313	76.9%	166	9.7%	228	13.4%
Triangle-T	1,279	834	65.2%	161	12.6%	284	22.2%
Union-T	27,675	16,928	61.2%	10,549	38.1%	198	0.7%
Vestal-T	9,257	7,404	80.0%	1,580	17.1%	273	2.9%
Windsor-T	2,739	1,952	71.3%	188	6.8%	596	21.8%
Deposit-V	941	593	63.0%	330	35.1%	18	1.9%
Endicott-V	7,164	3,086	43.0%	4,031	56.2%	47	0.7%
Johnson City-V	7,887	4,133	52.4%	3,754	47.6%	0	0.0%
Lisle-V	135	109	80.7%	11	8.1%	15	11.1%
Port Dickinson-V	653	404	61.9%	249	38.2%	0	0.0%
Whitney Point-V	431	223	51.7%	119	27.5%	89	20.6%
Windsor-V	438	320	73.0%	115	26.2%	0	0.0%
Source: U.S. Census Bureau: DP04 Selected Housing Characteristics: 2006-2010 American Community Survey 5-Year Estimates.							



Home Ownership

According to economist Robert Dietz, “Homeownership—attained through prudent lending practices—confers benefits for the homeowner’s family and their surrounding community, including improved health and school performance for children, increased civic engagement and volunteering, reduced crime, and higher lifetime wealth.”

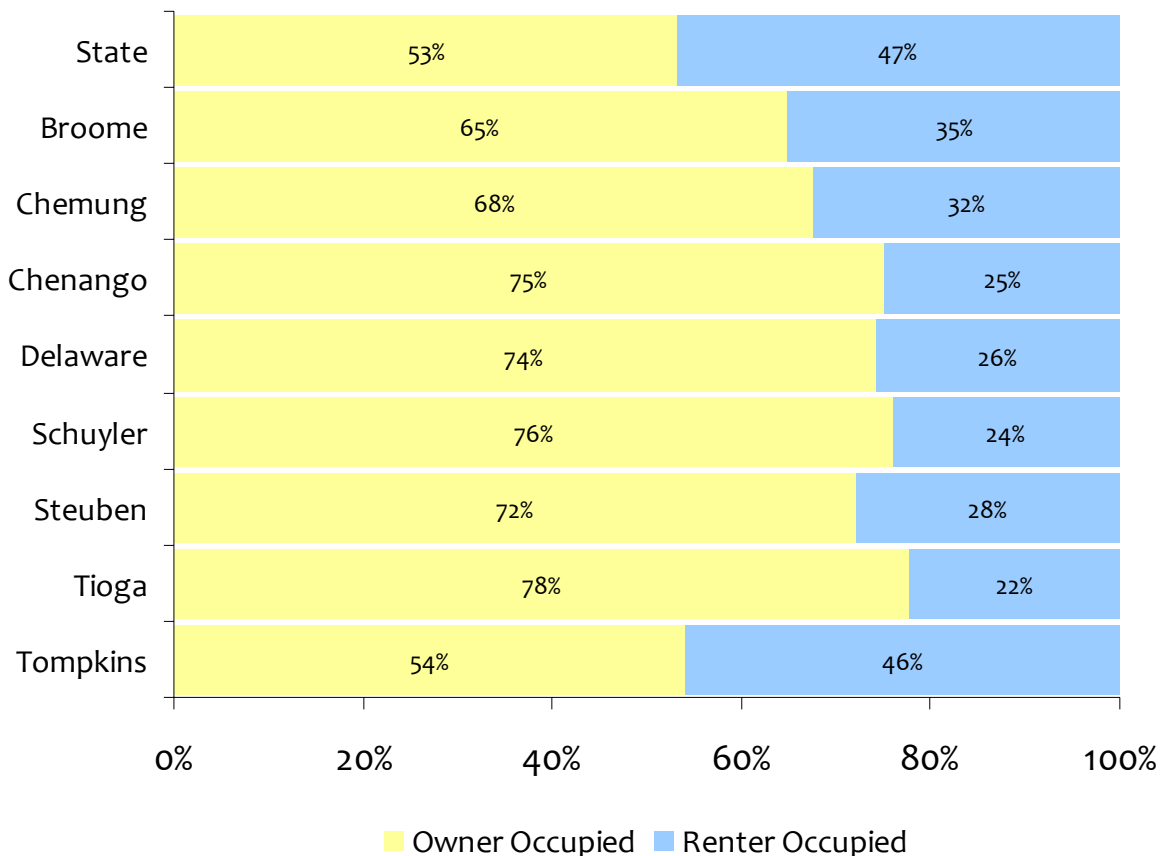
Broome County’s homeownership rate in 2010 (65%) was substantially higher than the statewide average (53%), but far from the highest in the region. Tioga County, at nearly 80%, has the highest rate, and Tompkins County, at 54%, has the lowest.

Within the county, the village of Endicott had the lowest homeownership rate at 42% and the town of Binghamton had the highest at 91%.

Downtown Loft Living

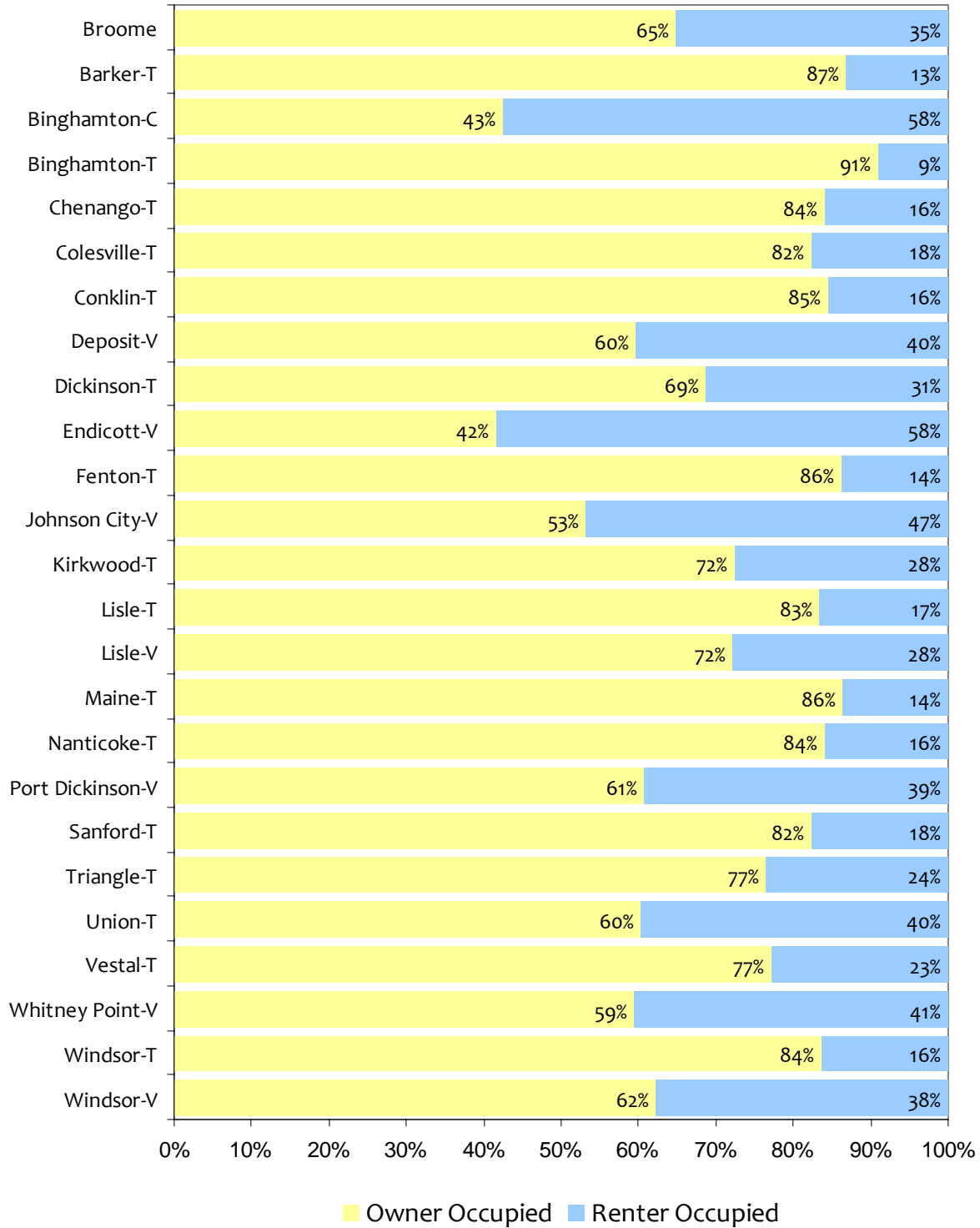
One of the bright spots in the local housing market has been the rehabilitation of upper stories of individual row type buildings in downtown Binghamton to upscale loft apartments. Although not significant in terms of total numbers, the trend shows increasing confidence in the urban core as a place to live.

2010 Owner and Renter Occupied Rates





2010 Owner and Renter Rates

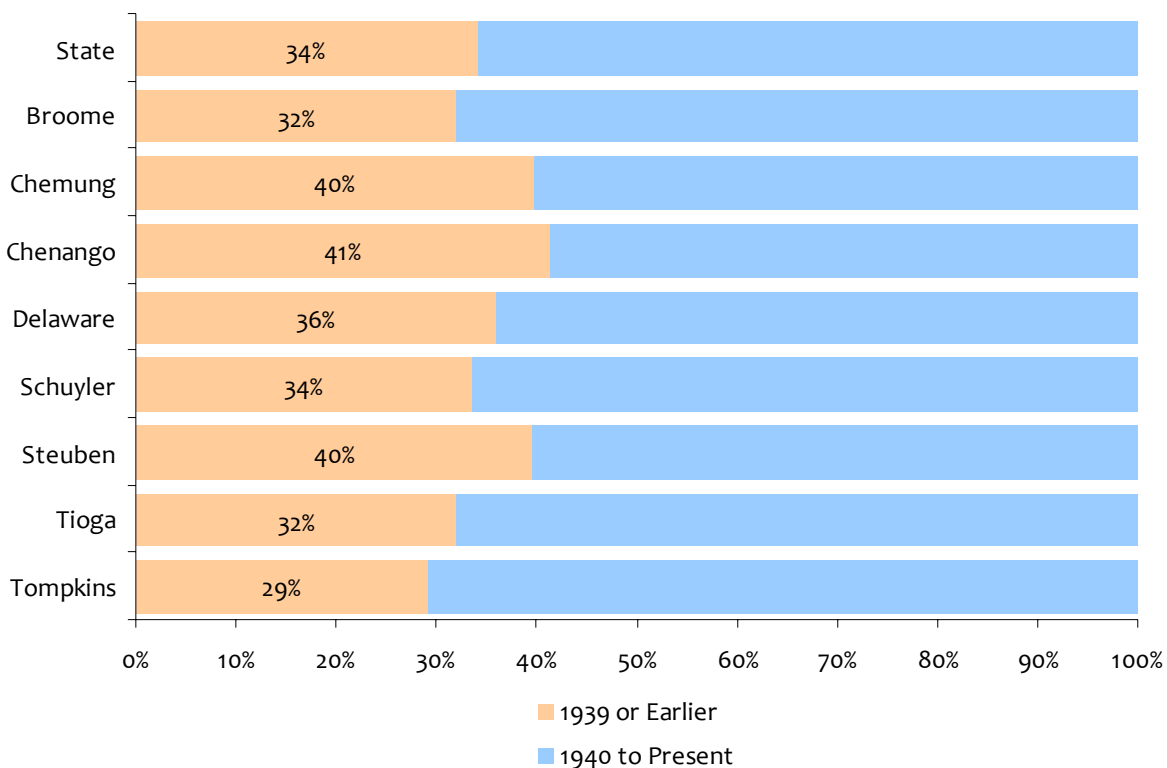




Housing Quality

One means to measure housing quality is the age of the buildings. Older homes tend to have more condition issues due to deferred maintenance and inadequate initial construction. Older homes often have built-in shortcomings such as lack of handicapped accessibility, inadequate wiring, use of lead based paint, asbestos, poor insulation and weatherization, and other issues. The percentage of homes built before 1939 is a generally accepted measure for housing quality, the more pre war homes a community has, the more likely there are quality issues. Broome County, as whole, has fewer homes built before 1939 than that State or most counties in the region. We are tied with Tioga County at 32%. Only Tompkins County at 29% is lower.

Year Residential Structure Built



But the older housing is not evenly distributed throughout the county. The Land Use chapter documents the suburban building boom that took place in the post World War II period. Outmigration to newly constructed homes in the suburban and rural towns left an aging housing stock in the villages and the urban core.

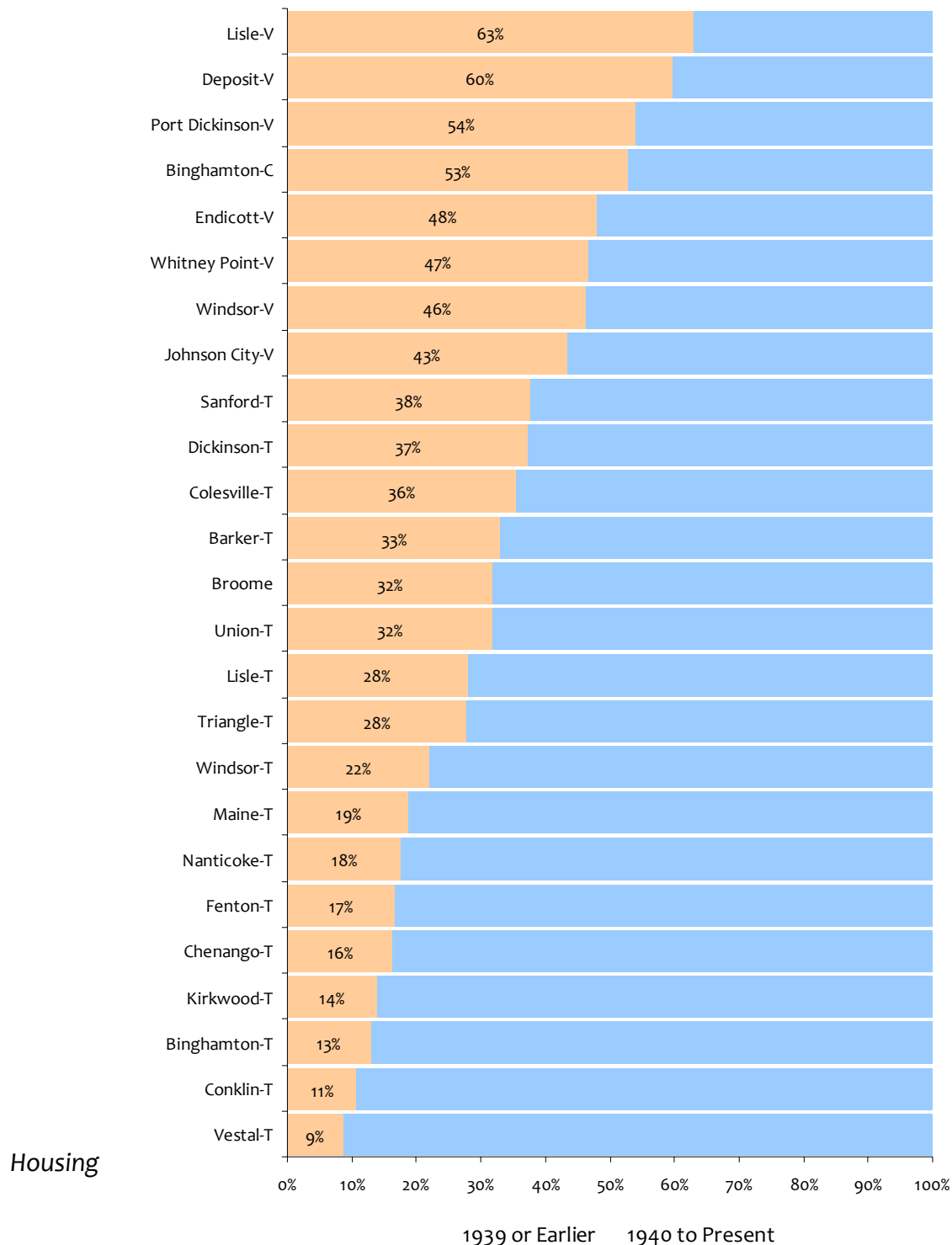


Broome County Comprehensive Plan

Building our Future

Less than 10% of the housing stock in Vestal was built before 1939. The figure for Binghamton is more than 5 times that amount. The percentage of homes built before 1939 is much higher than the statewide average for all of the rural villages, the urban core communities of Binghamton, Endicott and Johnson City, and the towns of Sanford, Dickinson and Colesville.

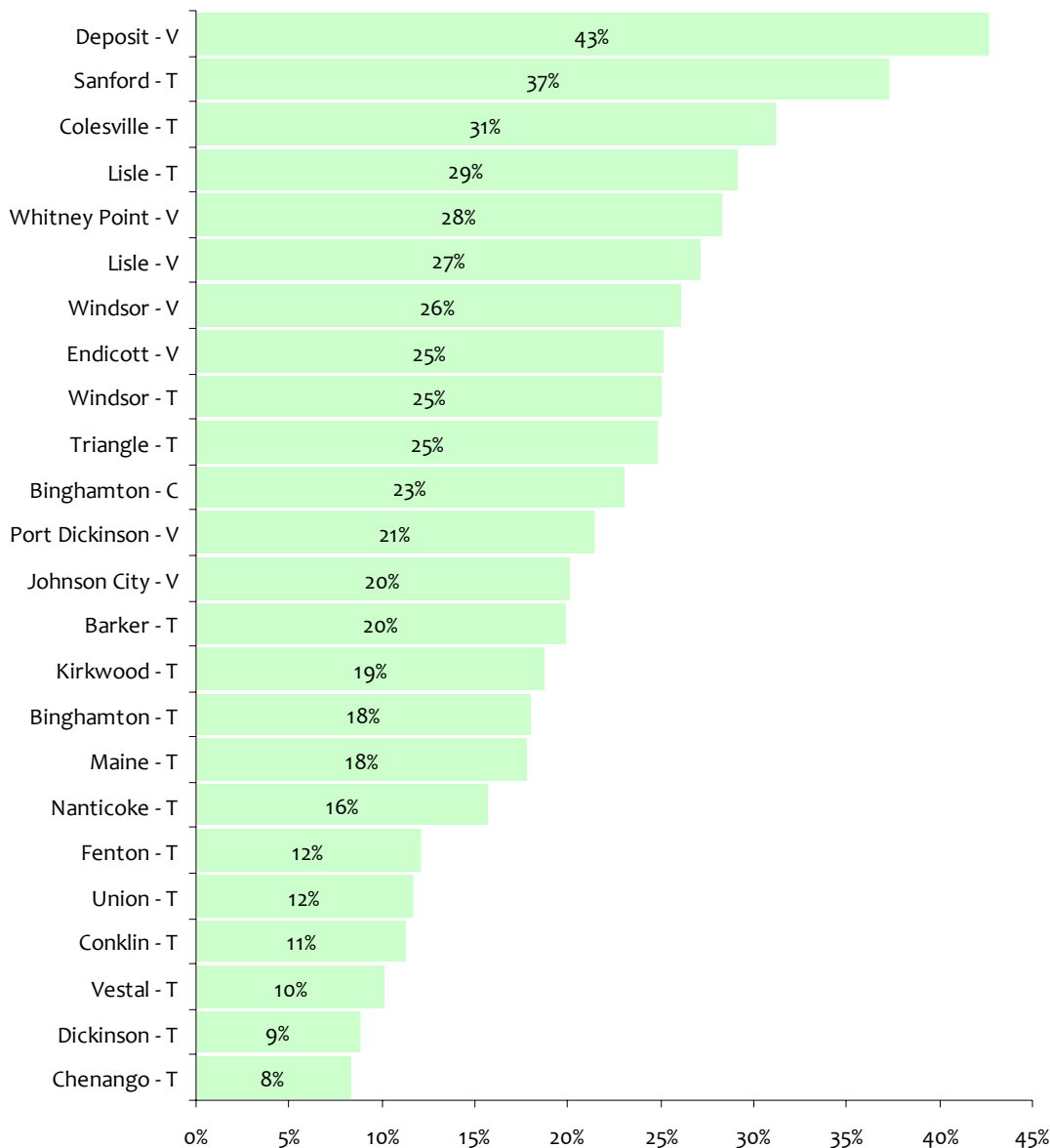
Year Residential Structure Built





A more direct measure of the quality of the housing stock is the judgment made by the local assessors in preparing the property tax roll. They categorize all structures as being in ‘Poor’, ‘Fair’, ‘Normal’, ‘Good’ or ‘Excellent’ condition. The New York State Real Property Assessor’s Manual defines ‘Poor’ as “severely dilapidated, in extreme need of repair and barely habitable” and ‘Fair’ as the “structure shows extant deferred maintenance. The functionality of the house is diminished but usable and in dire need of work.” Using this source, the quality of the housing stock is shown on the following graph:

Residential Structures in Fair or Poor Condition





According to local assessors, the Village of Deposit has the housing stock that is in the poorest condition and the Town of Chenango has the best rated housing. Taken together, housing condition and age of housing, we can identify the communities with the poorest quality housing stock. On both measures, Vestal ranks as having very high quality housing. The villages of Lisle and Deposit score poorly on both scales. The map entitled 'Residential Building Conditions' shows the areas with 'Fair' or 'Poor' housing quality and large concentration of pre-1939 housing.

Housing Values and Rents

Housing costs are generally a household's greatest expense. Rising or falling housing values and rents, therefore, have a great impact on the lives of residents.

Starting in 2006, housing values nationwide plummeted as a result of the subprime mortgage crisis. This collapse of the housing bubble has been cited as a primary cause of the 2007 to 2009 recession in the US economy. Deeply devalued home prices led to greatly increased foreclosures rates across the country, but mostly concentrated in markets that were previously expanding at the greatest pace.

The New York State Association of Realtors tracks home sale prices for each county. Statewide home sales prices are down 7% from 2008 and Broome County home sales are off less than that amount (4%). But two counties in the region have seen exploding sales prices in the face of the housing crisis. Home prices in Chemung and Steuben counties have gone up over 25% from 2008 to the present. There are a variety of reasons for these increases: improving employment at Corning, Inc., the Horseheads School District is particularly desirable, and some gas industry workers are not finding adequate homes in neighboring Pennsylvania counties.

Historical Median Home Sales Prices						
County	2008	2009	2010	2011	2012	Change from 2008
State	\$ 230,000	\$ 210,000	\$ 215,000	\$ 212,500	\$ 215,000	-7%
Broome	\$ 109,900	\$ 114,447	\$ 105,150	\$ 109,900	\$ 106,000	-4%
Chemung	\$ 85,000	\$ 86,000	\$ 99,900	\$ 105,225	\$ 106,500	25%
Chenango	\$ 96,750	\$ 93,000	\$ 78,440	\$ 85,500	\$ 91,835	-5%
Delaware	\$ 120,500	\$ 113,150	\$ 118,000	\$ 105,000	\$ 120,000	0%
Schuyler	\$ 119,500	\$ 100,000	\$ 127,280	\$ 140,000	\$ 125,000	5%
Steuben	\$ 84,900	\$ 86,900	\$ 91,000	\$ 90,500	\$ 107,000	26%
Tioga	\$ 136,585	\$ 120,250	\$ 125,000	\$ 115,426	\$ 117,000	-14%
Tompkins	\$ 182,500	\$ 167,000	\$ 177,416	\$ 181,850	\$ 180,000	-1%
Source: New York State Association of Realtors						



According to the US Census, rental rates in the region are substantially less than the statewide median figure for 2011. Tompkins County rents are far higher than any other county in the region, more than 37% higher than Broome County rents.

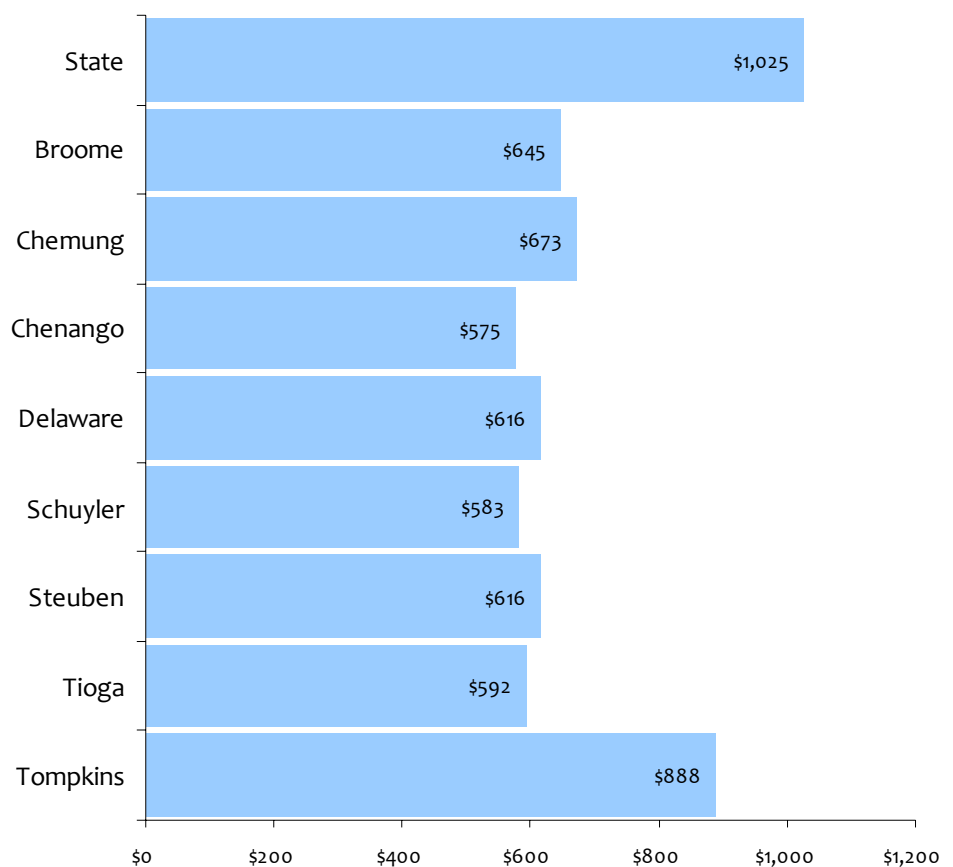
Senior Housing

Broome County is an aging community, and one of the most direct impacts of this is on the housing stock. Older homes, for all their character, were not built with a senior population in mind. The classic 'E-J Home' has bedrooms and bath on the second floor, narrow doorways, and the laundry in the basement. And this layout is not suited to an elderly resident with mobility limitations. Add to the inappropriate layout, inadequate insulation, older undersized electric service and aging plumbing, and seniors have a difficult time maintaining their independence. According to the Office for Aging Plan for Services, housing issues were the fourth most frequent reason that older adults and caregivers called their 'Senior Resource Line' in 2010.

To enable seniors to age in place, home modifications are often necessary. Financial assistance exists for low income seniors, but with significant waiting lists. For middle income seniors, there is no assistance for making needed repairs and modifications. And for residents in mobile homes, the cost of repairs may exceed the value of the home.

For seniors who are capable of living independently, but no longer wish to maintain a home, there are numerous providers of apartments. According to the Office for the Aging's 'Senior

2011 Median Gross Rent for Occupied Units





Broome County Comprehensive Plan

Building our Future

Apartment Guide', these are the units and locations of apartments which are targeted for senior living:

Senior Apartment Locations			
Municipality	Units	Name	Location
Binghamton	143	ABC Housing	One Hundred Chenango Place
	20	Carlisle-Binghamton Housing Authority	150 Moeller St
	24	Crandall Hall	2 Crandall St
	32	East Hills Senior Housing	50 East Clapham St
	40	Good Shepherd Fairview*	80 Fairview Ave
	37	Hamilton House	16 St. John Ave
	12	Henry Apartments	94 Henry St
	13	Historic Dightsville Gateway Apartments	235-256 Front St
	45	Lincoln Court - Metro Interfaith	21 New St
	150	Metro Plaza Apartments	110 Chenango Place
	222	North Shore Towers & Village	14&24 Isbell St & 45 Exchange St
	34	Saratoga Apartments	Felters Rd
	13	Schoolhouse Apartments	144-146 Clinton
	32	Stratmill Apartments	104 Victoria Dr
	8	United Methodist Homes - Manor House	3 Manor Dr
	22	United Methodist Homes - St. Louise Manor*	861 Front St
	147	Woodburn Court I	21-23 Exchange St
Union	154	Good Shepherd Village at Endwell*	32 Village Drive
	33	Ideal Senior Living Center*	508 High Ave
	102	Marian Apartments	701 Hooper Rd
	57	Nichols Notch-Sepp Group	301-401 Hayes Ave
	60	Harry L. Apartments - Sepp Group	235 Harry L. Drive
	125	Reynolds Pointe	1035 Anna Maria Drive
	12	Riverview Apartments for Seniors	270 Riverside Dr
	181	United Methodist Homes - Hilltop*	286 Deyo Road
Kirkwood	49	Wells Apartments - Sepp Group	299 Floral Ave
	32	Valley View Apartments	26 South Woodhill Ave
Conklin	24	Conklin Senior Housing	1095 Conklin Rd
Vestal	126	The Hearth at Castle Gardens	1715 Castle Gardens Rd
	24	Vestal Pines Apartments	2030 NYS Route 26
Whitney Point	24	Whitney Point Apartments - Sepp Group	10 Strongs Pl
Windsor	24	Windsor Woods - Sepp Group	49 Grove St
Deposit	81	Meadow Park Apartments	85 Fair St
Colesville	24	Norma Gardens	NYS Route 79
*This facility offers a continuum of care that includes independent living, adult care and assisted living.			

The largest concentrations of units is in Binghamton, with 994 senior living apartments, and Union (including Endicott, and Johnson City) with a combined total of 773 units. All of these facilities having a waiting list for new residents.



Broome County Comprehensive Plan

Building our Future

Of these facilities, five offer a continuum of care from fully independent living, to adult care and finally assisted living. Three other facilities in Broome County, St. Louise Manor and the Garden House both in Binghamton and Woodland Manor in Vestal, offer adult care or assisted living without the option of independent living. Adult care consists staff members cuing and reminding seniors to take medicines and participate in activities and assisted living means one staff person physically aids a resident with daily care such as dressing and bathing.

For seniors who need more intense care than assisted living provides, there is the option of a residential health care facility (nursing home). These facilities also provide short term rehabilitation services for residents recovering from serious injuries or major surgery. There are 10 residential health care facilities in Broome County, located in three towns: Binghamton, Union (including Endicott and Johnson City) and Vestal. Broome County operates Willow Point Nursing Home in Vestal. According to figures from the New York State Department of Health, the Residential Health Care Facilities in Broome County are as follows:

Residential Health Care Facilities (Nursing Homes)			
Municipality	Facility Name	Location	Number of Beds
Binghamton	Bridgewater Center for Rehabilitation & Nursing	159-163 Front Street	381
	Elizabeth Church Manor	863 Front St	120
	Good Shepherd - Fairview Home	80 Fairview	54
Union	Good Shepherd Village at Endwell	14 Village Drive	32
	Absolut Center For Nursing and Rehabilitation	301 Nantucket Drive	160
	Ideal Senior Living Center	601 High St	150
	James G Johnston Memorial Nursing Home	285 Deyo Hill Rd	120
	Susquehanna Nursing Home and Rehabilitation Center	282 Riverside Dr	160
Vestal	Vestal Park Rehabilitation and Nursing Center	Being Relocated	180
	Willow Point Nursing Home	3700 Old Vestal Rd	303

The Vestal Park Rehabilitation and Nursing Center on Vestal Road in Vestal was devastated by the flood of 2011. The facility's owners have chosen to rebuild at another site in Vestal. While the new building is constructed, Vestal Park operates from a leased wing of Willow Point Nursing Home in Vestal.



Broome County Comprehensive Plan

Building our Future

Residential Health Care Facility (Nursing Home) Bed Needs				
Area	2016 Bed Needs	Current Beds	Surplus Beds	Unmet Bed Needs
State	121,349	113,635		7,714
Broome	1,380	1,648	268	
Chemung	551	736	185	
Chenango	487	564	77	
Delaware	511	362		149
Schuyler	139	120		19
Steuben	691	691		0
Tioga	352	277		75
Tompkins	478	395		83

The New York State Department of Health forecasts the number of residential care beds that are needed for each county. For the 2016 planning year, their projections show Broome County as having a surplus of 268 beds. Chemung and Chenango Counties also have a surplus of beds. Delaware County has the greatest unmet need (149 beds).

Student Housing

Historically, student housing in Broome County meant on-campus dormitories at Binghamton University and conversion of older homes, primarily on the Westside of Binghamton, to student rentals. As enrollment at Binghamton University increased, the demand for student housing has outgrown both of these traditional mechanisms. The result is a dramatic growth in large scale private sector development of student oriented housing projects. Examples of this boom in new student housing projects include:

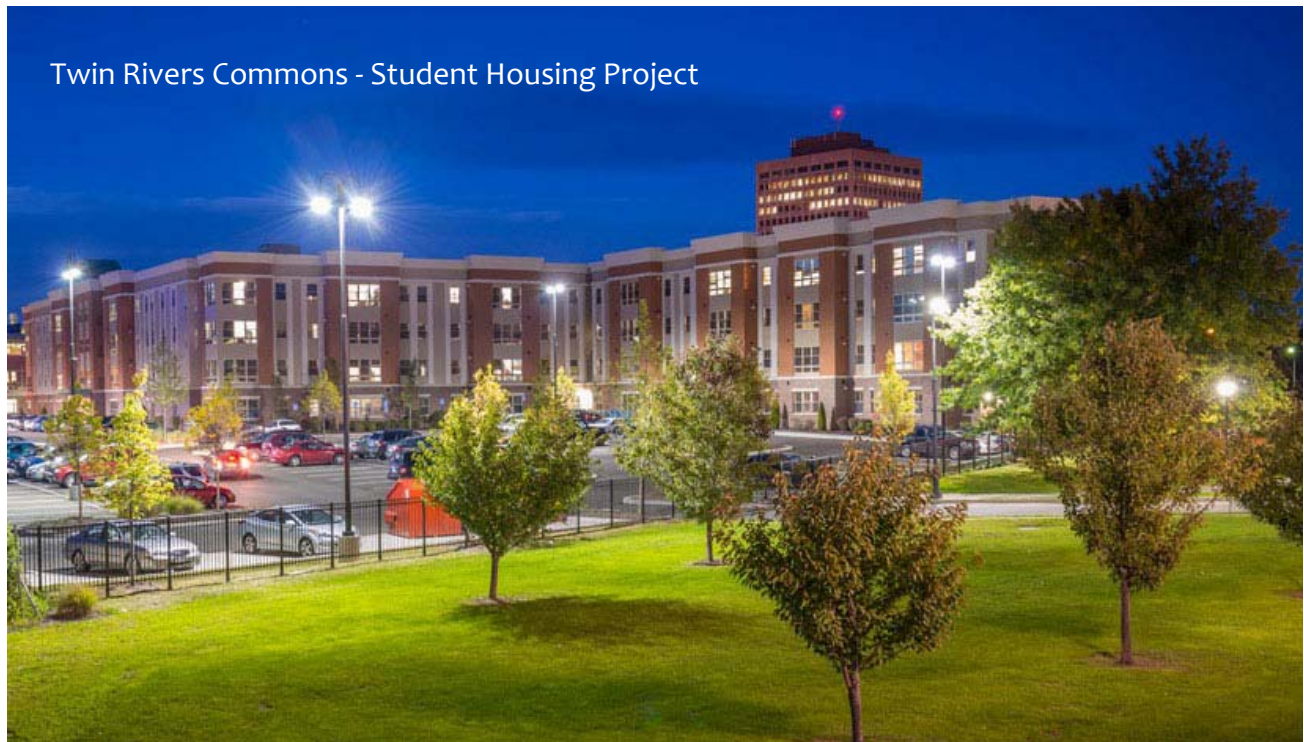
- Conversion of the former Marine Midland building in downtown Binghamton to 'luxury' student apartments
- Construction of Twin Rivers Commons along the Chenango River in downtown Binghamton
- Conversion of C. Fred Johnson School in Johnson City to the Campus Square
- Construction of University Plaza Apartments as part of a mixed use development in Vestal

These facilities are characterized by quality amenities aimed at the student market. These include indoor basketball court, 24-hour gym, computer lab, tanning salon, media and gaming rooms and advanced security systems.



Broome County Comprehensive Plan

Building our Future



In addition to these completed facilities, Broome County College recently announced plans to construct a 300-bed on-site dorm for their students. This is the first dormitory proposed for the college.

Marcellus Shale Drilling

According to a study prepared by the *Center for the Study of Community and the Economy at Lycoming College*, the exploration and extraction of natural gas from the Marcellus shale through high volume hydraulic fracturing led to dramatic changes in the housing market in Pennsylvania in the counties where drilling was most prevalent. We can learn from their experience and prepare for potential impacts in Broome County should New York State approve high volume hydraulic fracturing here.

From a housing perspective, development of the Marcellus shale in Pennsylvania proceeded in two general phases. Once leases are signed with property owners and drilling units are established, the gas industry moves into development mode. This brings in a wave of transitory workers to construct gas gathering lines and well sites. A final phase occurs when the industry matures in an area, and the gas companies establish regional offices and bring in a set of workers with more diverse housing needs. As an example of this, Chesapeake's Towanda office had 1,400 employees in 2011, and they expected to grow to 4,000 jobs there. Based on the



Broome County Comprehensive Plan

Building our Future

report entitled Marcellus Natural Gas Development's Effect on Housing in Pennsylvania prepared by the *Center for the Study of Community and the Economy at Lycoming College* some of the issues experienced in Pennsylvania include:

- The housing needs of first phase gas worker are initially met by hotels, 'man-camps', campgrounds, and local apartments. In rural areas without adequate zoning protection, this may result in inappropriate development without adequate supporting infrastructure.
- In university towns, some student housing has been converted to housing for gas workers.
- The upsurge in demand for rental housing has boosted rents, and this has made it difficult for seniors, the disabled, the poor and the working poor to secure adequate housing.
- Local housing developers and lenders were reluctant to pursue housing development for gas workers due to concerns that the industry would not last in the area more than a few years. However, gas industry representatives see development of Marcellus shale lasting 30 or so years.
- There was a gap between the expectations of second-phase gas workers and the local housing market. Middle and upper income gas employees relocating from the south and west were disappointed by the aging housing stock in Pennsylvania.
- For second wave workers with a fixed work site, they tend to want to live within a 30 minute commute of their office. This leads to the highest demand in the areas with the densest commercial and residential development. The greatest demand among this group was for homes in the \$125,000 to \$250,000 price range that are in move-in condition.
- Rehabilitation of older homes to meet the housing needs of both sectors of the gas industry was occurring, but it was not keeping pace with demand.
- Rural counties faced the greatest conflicts. Water and sewer infrastructure was not adequate to handle the influx of new residents in these areas. In addition, the rural counties of Pennsylvania lack the development community and non-profit safety net to adapt to the housing demands of the gas industry.
- Increased rental housing demand has led to some interest in brownfield redevelopment.
- Developers in Pennsylvania did not find a lack of skilled construction workers.
- The fast initial pace of Marcellus shale development in Pennsylvania led to much of the difficulties of the housing market. Landlords, developers, lenders and the marketplace needed time to adapt.



Broome County may be better suited to adapt to the changes brought by Marcellus shale development than the more rural Pennsylvania counties. Here there is a mature development community and a broad non-profit housing sector which is missing in the more rural areas of Pennsylvania. As new student housing comes online, especially in Vestal and downtown Binghamton, there have been concerns expressed about declining demand for existing student rentals. Gas workers seeking rental housing may fill that potential gap.

Flooding Impacts on Housing

Broome County has been subject to a series of devastating floods, and these have had a major impact on the housing inventory. The two most significant events were river floods in 2006 and again in 2011. According to code enforcement officials, these floods caused the following damages to residential structures:

Flood Damage to Residential Structures		
Level of Damage	Residential Structures Impacted	
	2006	2011
Minor	576	3,876
Moderate	444	2,775
Major	384	2,367
Destroyed	36	229

The primary response to protect the housing stock from flooding is participation at the municipal level in the FEMA funded 'buyout' program. Over 300 homes are proposed for purchase and demolition through the current round of this program, and New York State has proposed making more funding available for buyouts. A map of the FEMA funded buyouts is part of the [Land Use](#) chapter.

In 2012, Congress revamped the National Flood Insurance Program to make it self-sustaining. Before Hurricane Katrina, revenue from flood insurance premiums was enough to pay for the loss claims that were made. But after Katrina, and a series of devastating storms including Superstorm Sandy, the National Flood Insurance Program is \$24 billion in debt. The 2012 flood insurance reform eliminates subsidized rates on many flood insurance policies, allows for greater premium increases, and increases the fines on banks for compliance. The result will be dramatically higher flood insurance rates until the program revenues are high enough cover anticipated losses and the debt is retired.

Flooding is discussed further in the [Land Use](#) and [Water Resources](#) chapters



Land Use Trends

Broome County has a distinctive development pattern that consists of a densely settled urban core with associated suburban fringe, narrow transportation corridors that follow the river valleys, rural village nodes, and the open spaces found in rural landscapes.

The development patterns of Broome County were first defined by our steep slopes and rich river valleys. Native Americans and early European settlers utilized the rivers for navigation, and found the valley soils to be fertile for farming. The consequence of this was the urban core of the community formed first around the confluence of the Chenango and Susquehanna Rivers and then spread along the river valleys.

As development increased, roads, canals and railroads were constructed in the same river valleys connecting Broome County communities with the rest of the state and the growing nation. The construction of the Erie Canal spanning the northern tier of New York prompted the building of a canal roughly following the Chenango River's course. Operating from 1836 to 1878, the Chenango Canal dramatically cut shipping times between Binghamton and Albany and connected the growing manufacturing base here with the port of New York City via the Hudson River. Railroads finally reached the community in 1848, and they supplanted the Chenango Canal. Rail lines continued to encourage industrial development in the river valleys, and rail remains an important means of transport for high volume industrial users.

With the rise of the automobile in the 1950's and 60's, the development pattern of the community spread further into the suburbs. The Federal and the State highway systems took precedence over rail for moving goods and materials. With improvements to local and county roads linked to the State and Interstate system, the suburbanization of Broome County began. No longer did factory workers expect to walk from home to their jobs. Instead, bedroom communities such as Vestal, Conklin, Kirkwood and Maine began to grow dramatically. From 1950 to 1970, the City of Binghamton lost one-fifth of its population, while the suburban towns such as Chenango, Maine, the Town of Binghamton and Vestal exploded. Vestal's population tripled in this time from under 9,000 to nearly 27,000.

This outmigration was recognized as a threat to the urban core communities in the 1963 Broome County Comprehensive Plan, and one of the key solutions proposed was 'urban renewal'. Urban renewal is a catchall phrase for a series of federally funded programs that involved acquisition of a sizeable number of inner-city properties which are then demolished for large scale redevelopment and

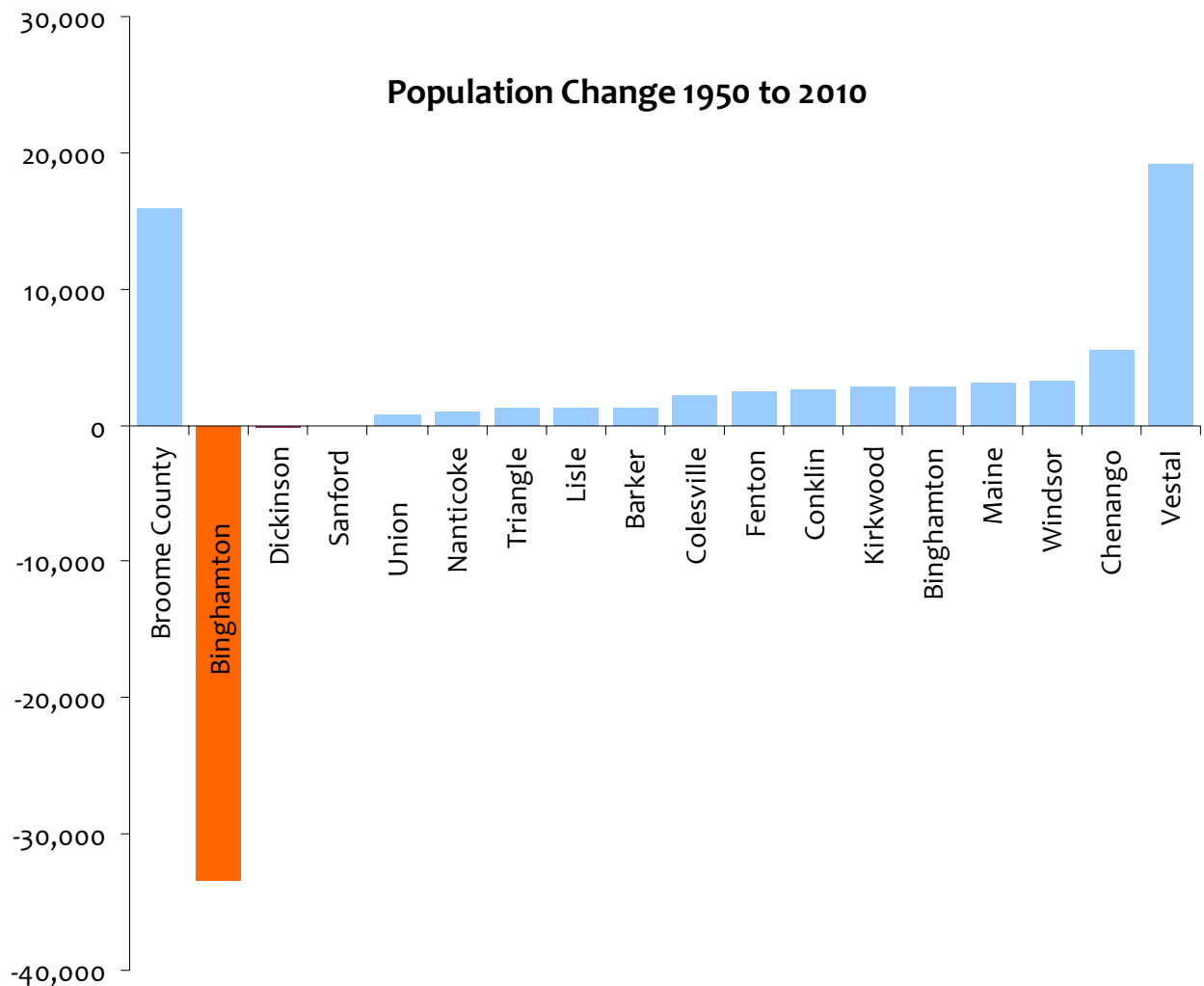


Broome County Comprehensive Plan

Building our Future

transportation projects. Urban renewal era projects in Broome County include Northshore Drive, the Broome County Veterans Memorial Arena, the Holiday Inn-Arena, and several other large scale commercial projects all located in downtown Binghamton. These projects replaced small scale buildings which accommodated pedestrian traffic with much bigger projects meant to appeal to the automobile traveler.

Urban renewal, however, did little to stem the outmigration. By 2010, the City of Binghamton had lost 33,388 from its 1950 level, and the villages across the county lost population. This trend is discussed more in the People chapter. This chart illustrates the movement from the urban core to the suburban communities:

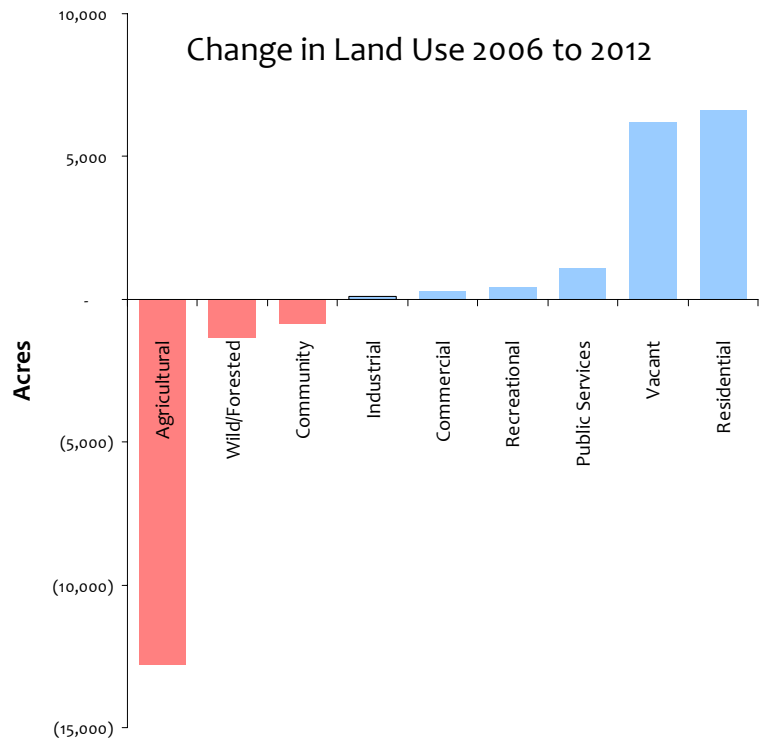




Current Land Use Pattern

The mix of land uses in the County is evolving. Between 2006 and 2012 roughly 12,800 acres of agricultural land were lost. Roughly half of this land is no longer farmed and is now considered vacant land. Another 6,600 acres has been converted to residential uses. The changing land uses are shown in this chart.

This conversion of agricultural land to residential land uses is a concern because, on average, residential land uses do not cover their costs in municipal services. Numerous case studies prepared by the American Farmland Trust and others show that residential uses pay more in tax revenues, but they demand substantially more in services. For every \$1.00 of revenue generated by residential land uses, \$1.16 in services is required. This compares to \$0.35 for working and open lands. Agriculture and working lands are discussed in greater detail in Open Space chapter.



Countywide Land Use - 2012		
Land Use Category	Acres	%
Agricultural	36,580	9%
Residential	191,411	45%
Commercial	4,991	1%
Industrial	3,073	1%
Community Services	6,265	1%
Public Services	4,631	1%
Recreational	7,682	2%
Vacant	147,191	35%
Wild/Forest	24,007	6%

Based on tax assessor's records, currently the largest land use in the county is residential. This includes single family homes, apartments, mobile homes and mobile home parks. Combined these land uses comprise nearly 200,000 acres and almost half of the county. The next highest category is vacant land at roughly 150,000



Broome County Comprehensive Plan

Building our Future

acres or 35% of the county. The 2012 land uses are shown in the above table and the attached map.

Corridors and Gateways

With the rise of the automobile, the transportation routes in Broome County have created a network of corridors and gateways that impact land use patterns. The transportation corridors favor commercial development in areas with good access to the heavily traveled roads. In addition to the impact of vehicular access, the perception of this community by visitors is shaped by the appearance of the buildings and streetscapes in the key gateways. For this plan, we have divided the transportation network into primary and secondary corridors and gateways.

Primary Corridors: Because Broome County is at the crossroads of three major interstates (I-81, I-88 and the future I-86), our primary transportation corridors see very high volumes of traffic. The average traffic at the confluence of I-81 and the future I-86 is over 50,000 vehicles per day. These primary corridors are defined as those roadways that have a New York State Department of Transportation functional classification of 'Interstate' or 'Expressway'. In Broome County, they are as follows:

- Interstate 81
- Interstate 88
- NYS Route 17 (future Interstate 86)

Secondary Corridors: Our secondary corridors see lower traffic volumes but are still very heavily traveled. For the purpose of this plan, we have defined the Secondary Corridors as roads that have a New York State Department of Transportation functional classification of 'Principal' or 'Minor' Arterial, an average daily traffic volume of greater than 5,000 vehicles, and extend through more than one municipality. Because so many local and regional travelers use these corridors, their appearance greatly influences perceptions of the community. As a result, the secondary transportation corridors merit special attention. These secondary corridors are as follows:

- Conklin Road - NYS Route 7
- NYS Route 7 - NYS Route 363 - Brandywine Highway
- Main Street - Court Street - NYS Route 17C - US Route 11
- NYS Route 26
- Front Street - Route 11 - Route 12
- Vestal Parkway - NYS Route 434
- Airport Road



Broome County Comprehensive Plan

Building our Future

A map of the primary and secondary corridors is attached.

As residents and travelers use these major and secondary corridors, they are greeted by gateways to the community as a whole, and to specific portions of the urban core. Sometimes these gateways are within a local municipality, other times a gateway is located in an adjacent municipality. The key gateways across the county are shown on the Transportation Corridors map.



Two of these gateways are especially important. Because Broome County is at the New York-Pennsylvania border, and is on one of the most heavily traveled north-south Interstates, the I-81 corridor is an especially important gateway. Over 50,000 visitors, many from out of state, travel through the county on this highway every day. The sites that they see form their opinion of this community.

The other significant gateway is Airport Road. Over the past decade, approximately 250,000 passengers have flown in and out of the Greater Binghamton Airport on an annual basis. Based on Department of Aviation surveys, approximately 70% of these flyers are business travelers. Business travelers who use the Greater Binghamton Airport generally drive south on Airport Road to their local destination. Over the past 5 years, the Broome County Department of Aviation has made \$32 million in investments to improve the function and appearance of the airport. But those improvements end with the airport campus. As business travelers travel down Airport Road, they pass by numerous derelict buildings which leave an unfavorable impression of the community.





Broome County Comprehensive Plan

Building our Future

Although less significant in terms of daily traffic, the connections between the Broome County to Tompkins County and the City of Ithaca are also important. Ithaca is home to Cornell University and the Ithaca College as well as a host of cultural activities. In addition, Tompkins County is one of the most affluent counties in the upstate region. Travelers from Broome County to Tompkins County and Ithaca use Route 79 or Route 38B, making these smaller rural routes noteworthy gateways.

Brownfields and Blight

Another factor in the changing land use pattern is the blighting influence of the abandoned and distressed properties in the urban core. Deteriorated building stock was cited by several stakeholder groups as a key weakness of the community. Broome County has a long history of industrial development. From cigar production to shoes factories to computers, the county has been at the center of every major phase of the industrial revolution. And historically, industrial and residential development was mixed, with many workers walking from home to their factory job. As manufacturing processes changed to favor large, horizontal layouts, the turn-of-the century plants became increasingly inefficient to operate. Some companies shuttered their plants and relocated elsewhere, others built new facilities on greenfield sites on the periphery of the urban core, and unfortunately, some firms abandoned their properties altogether. As these plants sat idle, they inevitably deteriorated and became eyesores. Because of their industrial legacy, these sites are now considered brownfields.

A brownfield is any property whose development or redevelopment is compromised by real or perceived environmental contamination. The key impacts of brownfields sites are:

- In some cases, brownfields are a threat to the public health and safety
- Brownfields tend to sit idle due to liability concerns
- As they deteriorate, brownfields have a negative impact on property values

In 2000, the Broome County Environmental Management Council (EMC), a grassroots citizen's advisory committee, formed a subcommittee to address brownfield redevelopment in the county. Working with the EMC brownfield subcommittee, the Broome County Planning assembled a database and inventory of known or suspected brownfield sites. There are currently 97 sites in the brownfields database.

Of the 97 sites, 32 have groundwater contamination, 26 have soil contamination, and at least 5 have off-site migration of contaminants. In addition to these known sites, there are numerous others that have the potential to pose a threat to human health



Broome County Comprehensive Plan

Building our Future

and the environment. The Brownfields map shows the general location of these sites.

In an effort to prioritize brownfield sites, and gain a greater understanding of their threat potential, the EMC Brownfields Subcommittee developed a sophisticated screening tool. Using the EMC's process, the *hazard potential* of sites is characterized first based on both the toxicity and the amount of contaminant present. As part of this process, the amount of information available regarding the site is also considered. Then the *exposure potential* for receptors is considered. The final result of this portion of the screening process, is a letter grade that indicates the hazard potential of each site. The following table summarizes the hazard potential rankings:

Health Risk Assessment at Brownfield Sites

Site Hazard Potential Ranking	Visitors	Employees	Residents	Construction/Utility Workers	Number of Ranked Sites
A	Low	Low	Low	Low-Medium	2
B	Low	Low	Low-Medium	Low-Medium	2
B-	Low	Low	Low-Medium	Low-Medium	11
C	Low	Low-Medium	Medium	High	13
C-	Low	Medium	Medium	High	20
D	Low-Medium	Medium-High	Medium-High	High	18
D-	Medium	High	High	High	12

According to this ranking methodology, there are 63 sites which pose a medium to high threat to residents and a high threat to construction and utility workers (sites ranked C or lower). In addition, there are 19 sites which are not yet ranked. The end result of the EMC's work was the [Brownfields Inventory and Ranking Project Summary Report](#).

As these contaminated properties sit idle, they deteriorate and cause disinvestment by neighboring property owners. Professor Keith R. Ihlanfeldt, Florida State University, and Associate Professor Laura O. Taylor, Georgia State University, completed an EPA-funded study of Fulton County, Georgia entitled "Assessing the Impacts of Environmental Contamination on Commercial and Industrial Properties". The study found a 'spillover effect' on property values up to 2 miles from the site of contamination. The researchers found that properties closer to contaminated sites had lower property values. The Brownfields map shows where these abandoned sites would have the greatest impact on property values in Broome County.



Broome County Comprehensive Plan

Building our Future

The negative impact of abandoned and deteriorated buildings was mentioned as a weakness in several stakeholder meetings, including Preservation Association of the Southern Tier, Susquehanna Heritage Area and the Western Broome Central Business Districts. Removing or addressing blighted buildings was also mentioned in numerous comments in the survey. Related to this, over 84% of the respondents to the survey thought that preserving our cultural and architectural heritage was a major (44%) or minor (40%) opportunity.

Flooding and Land Use Patterns

An increasingly significant factor in shaping local land use pattern is flooding and floodplain mapping. In 1936, the Susquehanna River valley in New York and Pennsylvania experienced a catastrophic flood. At the time, there was no flood protection system in place to prevent widespread devastation. Through the Flood Control Act of 1936, the Army Corps of Engineers built floodwalls, levees, and the Whitney Point Reservoir to provide flood protection for the urban core area. This federally constructed flood infrastructure was augmented by 19 flood control structures that Broome County built and manages, mostly in the western portion of the County.

This network protected the urbanized area from significant damage during the 1972 Hurricane Agnes flood. However, record-breaking floods in 2006 and again in 2011 exposed the vulnerability of an infrastructure-based approach to flood control. Flooding is discussed further in the [Water Resources](#) chapter.

The Federal Emergency Management Agency (FEMA) response to the floods of 2006 was to prepare new flood maps for the region. They developed preliminary flood maps intended to replace the ones that had been in use since the 1970's and 1980's in Broome County. This remapping process is currently on hold pending the development of a new methodology by FEMA for determining the floodplain in areas with levees and floodwalls, but the draft maps have been released. These preliminary maps dramatically shift the boundaries of the Special Flood Hazard Area (SFHA), commonly known as the 100-year floodplain, placing an additional 6,190 properties into the SFHA for the first time. The greatest number of properties are being added in the urban core of the County. The most significant increases are as follows:



Broome County Comprehensive Plan

Building our Future

Properties within the Special Flood Hazard Area				
Community	Existing Flood Map	Preliminary Flood Map	Added	Percent Increase
City of Binghamton	298	2,420	2,122	812%
Town of Union (including Endicott and Johnson City)	1,437	3,519	2,082	245%
Town of Vestal	926	1,747	821	189%

Although not finalized by FEMA, these preliminary maps were shown to be highly accurate when the flood of 2011 struck. A map of the changes to the flood plain is attached.

Flooding has a tremendous impact on land use patterns. As evidence of the impact of flooding on land use, the Town of Conklin lost 8.4 percent of its population between 2000 and 2010, while the County's population held steady. This impact is in part due to the fact that the hardest hit communities of Conklin, Kirkwood, Union, Vestal and the City of Binghamton have all participated in the FEMA-funded buyout program. Through this grant program, vulnerable homes are purchased and demolished by the local municipality and retained as greenspace. Approximately 150 homes have been acquired through this program, and several hundred more are proposed. Homes purchased and demolished through the buyout process are taken off the tax rolls and this vacant land is never developed again. A map of the FEMA funded buyouts is attached.

Inclusion of such large tracts of the urbanized area into the SFHA has the potential to dramatically alter development patterns. Buildings in the floodplain are subject to tougher building codes, and there is a requirement for flood insurance on all properties with a federally backed mortgage. Additionally, lenders may be reluctant to provide loans for properties in the SFHA. The result of this may be the devaluation of properties in the urban core and accelerated suburbanization and sprawl as developers seek to build out of the floodplain.

Public Water and Sewer

One check on the suburbanization of the County is the lack of infrastructure in the outer ring of communities. The lack of public water and sewer has tended to slow growth. A map showing the extent of public water and sewer within the County is



Broome County Comprehensive Plan

Building our Future

attached. Outside of the public water and sewer service areas, development tends to be single family homes on larger lots. Large scale apartment, congregate care facilities, major commercial projects and industrial development are generally not feasible without access to sewers and public water. Increasingly, however, smaller-scale sewage treatment plants are being constructed for communities such as Chenango and a portion of the Town of Windsor to address existing sewage problems and accommodate growth. With the rise of ‘package plants’, sewage treatment is being handled on a less centralized basis. The result may be new nodes of development in the more rural areas of the county. Wastewater infrastructure is discussed in greater detail in the [Water Resources](#) chapter.

Slope

Another significant check on the spread of development out of the river valleys is the steep topography of the area. Slope conditions are one of the most important factors that affect the development potential of land. Slopes of less than 10 percent are most suitable for development

Slope	Percent of Land Area	Acres
Less than 5%	22%	10,216
5-10%	26%	11,771
10-15%	20%	9,169
15-20%	12%	5,303
More than 20%	20%	9,306

while development on land with slopes of 10-15 percent incurs significant additional construction expense. Land with slopes greater than 15 percent is usually unsuitable for development. Slope percentages for land in the County are shown below and illustrated on the [Slope](#) map. Less than 1/2 of the county (48%) has slopes of less than 10%, making it very challenging to find large flat parcels for development.

Zoning

The historical land use patterns show us how the community has developed over time. Through a comprehensive plan, we have an opportunity to guide future development patterns. The most powerful tool for guiding development is zoning and related ordinances such as site plan review. In New York, this power can only be enacted at the town, village or city level. State law gives local governments the power to ‘provide for the protection and enhancement of the physical and visual environment’. In the context of land use and comprehensive plans, this translates to the power to enact and enforce zoning and related ordinances. This is the concept of ‘municipal home rule’.



Broome County Comprehensive Plan

Building our Future

Traditional zoning divides a community into various districts and permits or disallows land uses by zoning district. Some uses are ‘permitted by right’ while others may require a greater level of review and scrutiny. In Broome County, 19 of the 23 municipalities have some form of zoning. Among these communities there are over 120 different zoning districts. This overabundance of zoning districts was cited as a weakness during the stakeholders meeting that we conducted with the Aging Futures Partnership. We have summarized these districts into the following general categories:

Nearly two-thirds of the County is zoned agricultural or rural residential which typically allows agricultural uses. Residential zoning, which includes multi-family and mobile

Local Zoning		
Zoning Category	Acres	%
Agriculture/Rural Residential	293,204	64%
Residential	68,414	15%
Business/Commercial	10,115	2%
Industrial	7,377	2%
Recreation/Open Space	6,306	1%
No Zoning	70,569	15%

home parks, is the next highest category, accounting for 15% of the county’s acreage. Tied with residential, is the 15% of the county that has no zoning restrictions. Business and Industrial zoning districts each count for just 2% of the local acreage. A map of the zoning districts countywide is attached.

Four communities (the Town and Village of Lisle, Nanticoke, and Triangle) in the County have no zoning regulations. Communities without zoning have no ability to regulate land uses within their borders. The result is that noxious uses which adversely affect community character are free to operate without any conditions. Comprehensive plans for both the Town of Lisle and Triangle call for the adoption of land use regulations (zoning). Nanticoke and the Village of Lisle do not have comprehensive plans.

Future Land Use

The rural character of Broome County is eroded by the loss of agricultural land and the spread of development. Over one-third of survey respondents thought that loss of community character was a major obstacle to the County achieving its goals, and nearly one-quarter were concerned about the loss of open space. Almost half of respondents (48%) thought that ‘Protecting our open spaces and rural landscapes’ was a major opportunity for the County to pursue. Over 40% wanted to see commercial and industrial development concentrated in the urban core communities.



Broome County Comprehensive Plan

Building our Future

A vibrant urban core compliments the outlying communities, giving rural residents a destination for work and entertainment. One respondent to the survey summed it up this way, “No matter what we do, if the cores of our communities are still struggling and dilapidated, it will hurt economic growth in other areas.”

In addition to issues of community character, well-managed farmland provides groundwater recharge areas and helps control storm water runoff. Development of farmland increases impervious surfaces such as parking lots and this leads to increased runoff during storm events. Agriculture is discussed further in the Working Lands chapter.

Another result of the competing forces shaping land use in Broome County is the current lack of developable land. Planning staff conducted a sample search of the County’s Geographic Information System for developable land with the following criteria:

- The land is vacant
- 20-acre minimum
- Within one mile of a highway ramp
- Outside of the floodplain
- Access to natural gas and public water and sewer
- No steep slopes
- Industrially or commercially zoned

Despite 35% of the land (147,191 acres) in the County being vacant, no parcels met these modest criteria. Without shovel ready development sites, the County cannot compete for economic development opportunities presented by site selection firms, and we cannot accommodate local firms looking to expand their operations.

One response to the lack of developable land for economic development is to focus our resources on brownfield sites. These abandoned, distressed properties require less investment in infrastructure and their redevelopment can reverse a pattern of disinvestment in the surrounding neighborhood. To date Broome County Planning





Broome County Comprehensive Plan

Building our Future

has secured over \$1,000,000 in state and federal grants for brownfield assessment, clean up, and end use planning. In addition, the County created a Brownfield Clean Up program funded by an occupancy tax on hotel and motel rooms. The result of this effort is redevelopment and developer interest at a number of brownfield sites across the county.

There have been successes redeveloping local brownfields for industrial and commercial use. Two striking examples are the redevelopment of the Ranger-Paracord site in Johnson City to a state-of-the-art regional printing facility for Gannett Publishing and the construction of the Charles Street Business Park on the former Anitec campus in Binghamton's First Ward. These multi-million dollar ventures can serve as a model for future industrial investments.

There has also been a recent trend of residential development in the urban core. Notable examples of this include:

- Rehabilitation of upper stories of individual row type buildings in downtown Binghamton to upscale loft apartments
- Redevelopment of 20 Hawley Street to luxury student housing by Alfred Weissman Real Estate.
- Construction of major housing developments, including senior housing complexes, in Johnson City and the town of Union.



These developments do not alone reverse decades of outmigration from the core communities, but they do illustrate market trends that can be encouraged.



Infrastructure

According to the American Society of Civil Engineers, “Infrastructure has a direct impact on our personal and economic health” and, “A healthy infrastructure will enable us to remain a strong and prosperous nation”. The location, capacity and condition of our infrastructure all play a critical role in shaping Broome County.

Transportation

Transportation planning has a significant impact on issues such as improving public health, preserving and improving the environment, making land use decisions, and enabling economic development. The Binghamton Metropolitan Transportation Study (BMTS) is the regional transportation planning agency which serves portions of Broome and Tioga counties. BMTS’s adopted plan for this region is *Transportation Tomorrow: 2035 - Creating a Sustainable Future*. This comprehensive look at all modes of transportation was adopted by BMTS in 2010.

The transportation plan contains these elements: Infrastructure Preservation, Transportation Safety and Security, Public Transit Service, Regional Transportation Systems Management and Operations, Freight Transportation, and Intercity Passenger Travel.

Infrastructure Preservation: According to *Transportation Tomorrow: 2035*, “preservation of our investment in transportation infrastructure remains the top priority.” Respondents to the comprehensive plan supported this priority. When asked to allocate limited resources, the number one

Transportation Tomorrow: 2035 The Vision

In 2035, Greater Binghamton will be a successful, livable, and vibrant region, and its regional transportation system will have the following characteristics:

Sustainability - Community sustainability will be supported in terms of reduced energy consumption and greenhouse gas emissions; and improved public health and social equity.

Accessibility - All users will have convenient, mode-neutral access to employment, education, services, and other destinations.

Mobility - Personal travel and goods movement will be efficient, with many modes of travel and excellent connections among them.

Safety - All users will be able to travel safely and with a sense of security, regardless of which mode they choose to use.

System Preservation - Transportation infrastructure will be maintained in a state of good repair, as the foundation for providing safe, efficient mobility.



Broome County Comprehensive Plan

Building our Future

priority of survey respondents was “maintaining our roads, bridges and infrastructure”. For this element, the plan makes the following commitments:

1. Preserving transportation infrastructure is the highest priority of the BMTS in this plan (*Transportation Tomorrow: 2035*). There is a commitment over the life of the Plan to spend 75% of the available resources on a range of system preservation projects including replacement, rehabilitation and preventative maintenance.
2. Protect urban core arterial streets. In order to support development of a sustainable region, attention will necessarily be directed to the infrastructure in the urban core communities. Rehabilitation or reconstruction of key urban arterial streets will be given a higher priority, for example, than that of a highway in an outlying location. Pavement life cycle forecasts in areas where economic development actions result in more heavy truck volume may become a special focus.
3. Maintain the Broome and Tioga County transit fleets in a state of good repair and meet life cycle replacement targets. This is equally important to meeting the system preservation goal.
4. To fund preventative maintenance of pavements, bridges and buses when such techniques are demonstrated to reduce life-cycle costs.
5. Maintain arterial pavement sufficiency at no more than 10% poor.
6. Maintain collector street pavement sufficiency at no more than 25% poor as funding permits, once arterial goals are met.
7. Reduce the number of deficient bridges by 10% and then maintain that level.

Transportation Safety and Security: According to BMTS analysis, crashes cost this community \$250 million per year on average. And safety mitigation projects are often less expensive than transportation projects that add capacity. *Transportation Tomorrow: 2035*, identifies three focus areas for safety: Improve roadway safety; Improve pedestrian safety; and Address the needs of an aging population. The plan makes these commitments to transportation safety and security:

1. Improve roadway safety through the routine use of traffic engineering methods to identify high crash locations and implement appropriate countermeasures.



Broome County Comprehensive Plan

Building our Future

2. Continue to use the Road Safety Assessment process to identify safety deficiencies on urban arterial and collector streets.
3. Improve pedestrian safety by committing to construction of continuous sidewalk systems in key locations, including urban core neighborhoods, and in the vicinity of school and bus routes. Favor walkability on urban core arterial streets.
4. Invest in projects and programs that respond to the special needs of elderly drivers, including appropriate signing, wayfinding, and intersection design.
5. Invest in projects and programs that respond to the special needs of elderly pedestrians, including sidewalk construction, maintenance, and lighting; and accessible intersection design.

Public Transit Service: Public transit is a vital element of the region's transportation system because it provides mobility to residents who do not have access to a car due to affordability, physical limitations or choice. However, the transportation plan recommends expanding beyond this captive audience in order to be of greater benefit to the community. In order to become the mode of choice for residents with transportation options, public transit must provide a high level of convenience and safety. For public transit, the BMTS plan recommends the following:

1. Enhance fixed route bus service. BC Transit should evolve to 15 minute headways on all routes, which will greatly enhance convenience and make transit a more attractive mode to choice riders. Ride Tioga Public Transit should evolve its fixed route schedule to hourly service, and serve more transfer locations in Broome County including the Greater Binghamton Transportation Center. Ultimately the need to modify the intermunicipal agreement between the counties will be superseded by the previously recommended consolidation into a single transit operation. The proposed consolidation will also facilitate schedule coordination.
2. Provide transit amenities. A relatively low cost improvement that creates a significant benefit in terms of making transit more attractive is the construction of bus shelters and information kiosks. Shelters should be placed at higher volume bus stops first, but also considered for more isolated locations. Kiosks may be considered for high traffic locations like shopping malls.



Broome County Comprehensive Plan

Building our Future

3. Enhance regional paratransit services. Paratransit service must grow to meet demand, which is forecasted to increase throughout the Plan period due to an aging population. A robust rural transportation service promotes the goal of sustainability by allowing people to conveniently travel to the metropolitan area for jobs and services without relying on a car. BC Country and Ride Tioga services must be redeveloped over the life of the Plan to provide for safe and convenient travel by public transit throughout Greater Binghamton. Further evaluation is necessary to determine the value of retaining a separate rural paratransit service, or to providing service with a combination of paratransit feeder service to rural villages and express bus service from those locations to the metropolitan area.
4. Support travel demand management strategies. Construction of park & ride lots is of value to all shared ride modes, including transit, and carpool/vanpool. Opportunities must be identified for the construction of new lots in outlying areas of the region not currently served.
5. Consolidation. Develop a fully integrated Broome and Tioga County transit service, which would allow people to more easily use transit to travel throughout the region, creating a positive impact on green house gas emissions and broader regional sustainability.

Regional Transportation Systems Management and Operations: Accidents, work zones, weather conditions and special events can all negatively impact traffic. But a robust operations strategy can lessen these impacts by detecting and clearing incidents quickly, limiting the number and duration of work zones, responding well to weather conditions and planning for special events. For this region, the *Transportation Tomorrow: 2035* plan makes two system management and operations recommendations:

1. Traffic signal improvement. Using Intelligent Transportation Systems (ITS) Advanced Traffic Signal System technology to optimize traffic signal timing and operations. Over the life of the Plan, this is expected to evolve from time based coordination and closed-loop systems to fully traffic adaptive systems that can optimize signal operations in real time.
2. Additional ITS deployment. In the context of reviewing and updating the ITS Regional Architecture, new functions like IntelliDrive applications may be determined that have a positive benefit in the Binghamton region. Others may be deployed on a statewide basis, like commercial vehicle operations



Broome County Comprehensive Plan

Building our Future

applications. BMTS should be prepared to implement appropriate management and operations strategies.

Freight Transportation: Despite our location at a nexus of four freight railroads (two Class 1 national lines, one regional carrier, and one short line), only a handful of local companies utilize rail shipping. Across upstate, nearly all (84%) of freight moves by truck. However, the vision of the *New York State Rail Plan* completed in 2009 sees the future rail system to be “green” and “support sustainable economic development” and which would strengthen New York’s “premier position in a rapidly changing global economy.” For these reasons, the *Transportation Tomorrow: 2035* plan makes the following recommendations for freight transportation:

1. Identify and prioritize for project development connections from the National Highway System principal arterial highways to significant local freight destinations that require infrastructure upgrades to facilitate truck movement; including those that support specific development proposals.
2. Collaborate with local governments to resolve issue of curbside delivery and truck parking in key areas including the core community downtowns and Main Street. Do so creatively in the context of Complete Streets design.
3. Cooperate with New York State and Pennsylvania in the implementation of ITS commercial vehicle operation initiatives.
4. Support public-private partnerships for the development of rail projects only when the public benefit can support the public investment. Initial focus is on the Norfolk Southern Portageville Bridge replacement project, and on the NYS&W Syracuse Branch.

Intercity Passenger Travel:

Typically, a plan like *Transportation Tomorrow: 2035* only covers surface transportation within a region. However, as BMTS prepared the plan, the public raised questions and concerns about travel to other regions and its importance to sustainability. Because issues related to intercity travel is beyond the





Broome County Comprehensive Plan

Building our Future

scope of BMTS, the plan does not make specific recommendations. However, it makes findings related to bus service, passenger rail, and air service.

In late 1966, the *Phoebe Snow* made its last passenger rail run from Buffalo through Binghamton and ending in Hoboken, New Jersey. The demise of passenger rail between Binghamton and the Metro New York City area was the result of the cost structure of rail and the convenience of automobile travel. Since then, the reinstitution of passenger rail has been a perennial topic of interest. In 2002, the feasibility of passenger rail from Binghamton to New York City was studied and the only potentially feasible route was determined to be via Scranton, Pennsylvania. In 2008, Amtrak initiated a new passenger rail study at the request of New York State Department of Transportation. The results of that study have not been released.

Aviation

In 1945, construction of a new airport began on Mount Ettrick in the Town of Maine. Need for a new airport to replace the Tri-Cities Airport in Endicott was necessitated when the Civil Aeronautics Authority (the forerunner of the Federal Aviation Administration) ruled that the Tri-Cities Airport would only be able to accept commercial flights during the day when conditions were clear due to its location and topography. The new Broome County Airport was dedicated in 1951. The airport was renamed Binghamton Regional Airport in the 1990's and renamed 'Greater Binghamton Airport' in 2003. This reflects the kick off of a rebranding campaign that was initiated by the BCPlan which was adopted the previous year.

Greater Binghamton Airport:

- The Greater Binghamton Airport generates \$52m in annual economic impact to the community
- The airport is our portal to the global economy. Having a successful airport is considered part of business retention and expansion. Local employers like Lockheed Martin and BAE rely on the airport for their business travel

The Greater Binghamton Airport is owned by Broome County. The airport is self-sufficient and pays local, school, town and county taxes. It is a public-use, commercial service airport that serves the southern tier of New York and portions of northeastern Pennsylvania.

The Greater Binghamton Airport is a non-hub commercial service airport and the sole access point of scheduled air service in Broome County. It is considered by the FAA to be a 'primary airport'. The Airport is serviced by US Airways, Delta, and United Airlines. Non-stop flights are available to Washington DC (Dulles International Airport via United Airlines, Philadelphia, thru Philadelphia International Airport via US



Broome County Comprehensive Plan

Building our Future

Airways, Detroit, thru Detroit Metro Airport via Delta Air Lines. These airlines offer a combined total of 22 daily arrivals and departures. It is estimated that Two-thirds of the passengers in/out of BGM are business travelers. In addition to commercial air travel, the Greater Binghamton Airport accommodates general aviation and charter services as well.

The newly renovated passenger terminal building offers amenities such as wireless internet access, a business center workplace, a conference center meeting room and electronic airline check-in kiosks. There is also a Subway restaurant, a lounge, and a gift shop located in the terminal building.

Transportation Tomorrow: 2035 looked at a persistent aviation related issue: local residents travel to Syracuse, Albany or New York City because of the perception of cheaper flights and better air service. This was raised at several stakeholder meetings for the comprehensive plan as well. One suggested solution to this is to replace Greater Binghamton, Ithaca/Tompkins County and Elmira-Corning airports with a new Southern Tier Regional Airport. The analysis in *Transportation Tomorrow: 2035* concludes that a consolidation of the three airports would not yield a significant improvement in air service. In 2011, the three airports combined generated

2011 Enplanements (according to the FAA)	
Greater Binghamton	108,172
Elmira/Corning	152,582
Ithaca Tompkins	121,733
Syracuse	982,709
Albany	1,216,626

approximately 1/3 of the enplanements of Syracuse or Albany. Enplanements include scheduled and non-scheduled boardings, stopovers, and transfers. Therefore, combining the three regional airports would not lead to a significant increase in air service, because the new facility would still be far smaller than competing airports. In addition, the cost of new airport would stretch into the hundreds of millions.

In 2009, the Broome County Department of Aviation completed an Airport Master Plan Update to determine, “the airport’s potential for serving the community and enhancing revenue, evaluate the needs of current and future airport users, and to identify specific opportunities for improving airport facilities.” The Airport Master Plan update lays out three long-term goals for Greater Binghamton Airport:

- Goal 1: Meet the air travel needs of the citizens and businesses in the airport’s service area
- Goal 2: Maintain airport facilities in a manner that is consistent with a first-class operation
- Goal 3: Identify opportunities to enhance the economic viability of the airport through a “business planning” component



Broome County Comprehensive Plan

Building our Future

To meet these goals, the Airport Master Plan layouts out 23 needed upgrades proposed in three phases. The status of these projects is as follows:

Airport Upgrades Project Phasing Plan	
Phase I	Status
I-1 Runway 34 Engineered Materials Arresting System Replacement	Complete
I-2 Relocate Runway 16 Medium Intensity Approach Lighting System With Runway Alignment Indicator Lights and relocate glideslope to reduce threshold displacement	Projected for 2014
I-3 Air carrier Apron rehabilitation	Complete
I-3 Glycol capture drainage system	50% Complete
I-4 Construct private hangar (23,800 square feet)	On hold
I-5 Reconstruct sand storage building	Projected for 2014
I-6 Demolish former airfield maintenance building	On hold
I-7 Connecting link in Runway 10-28 parallel taxiway (1,700' x 50')	Projected for 2015
I-8 Relocate electrical vault & ground vehicle fuel farm	On hold
I-9 Construct terminal de-icing area	Projected for 2016
Phase 2	Status
II-1 Design & Construct fueling & de-icing vehicle spill containment & parking area	Pending
II-2 Construct private hangar (20,000 square feet)	Pending
II-3 Expand West Apron (2,590 square yards)	Pending
II-4 Consolidate General Aviation parking	Pending
II-5 Demolish Air Cargo building	Pending
II-6 Design & Construct North Apron roadway	Pending
II-7 Design private hangar (22,500 square feet)	Pending
II-8 Expand North Apron (5,310 square yards)	Pending
II-9 Runway 10 extension	Pending
II-10 Runway 28 extension	Pending
II-11 Construct T. Hangers	Projected for 2013
Phase 3	Status
III-1 Acquire land use control Runway 28 Runway Protection Zone	Pending
III-2 Design & Construct South Apron (32,000 square yards)	Pending
III-3 Design & Construct rental car ready/return	Pending
III-4 Expand terminal parking (6,640 square yards)	Pending
III-5 Install runway centerline lights – Runway 16-34	Pending
III-6 Conduct terminal space allocation study	Pending
III-7 Construct South Apron Hangars	Pending



Bicycle/Pedestrian Network

One of the recommendations of *Transportation Tomorrow: 2035* plan was the need to update the 1996 BMTS Pedestrian & Bicycle Plan. Because those modes of transportation have unique needs, BMTS decided to produce two separate plans. A draft of the new Pedestrian Plan is now available, and an update to the Bicycle Plan will follow.

Although bicycle and pedestrian infrastructure has received more attention since the 1996 BMTS Pedestrian and Bicycle Plan was adopted, facilities for these modes of travel are still typically the first ones targeted for elimination to reduce project costs. This is unfortunate because there is considerable demand for pedestrian facilities in the BMTS region. The most recent American Community Survey (2006-2010) finds that over 10% of households in the region do not own a car. In the Broome Community Health Assessment from 2010-2013, nearly 70 percent of survey respondents voiced a need for more recreational spaces, such as parks and walking trails, as well as more connected and better maintained sidewalks. For the comprehensive plan survey, pedestrian and bicycle amenities such as bike racks, benches, and sidewalks was the number one priority for elements residents want to see as part of new development. In addition to growing demand, pedestrian facilities have many non-transportation related benefits to the community. These include:



Health Benefits: Walking and biking helps residents meet physical activity goals. Regular physical activity has been shown to reduce obesity, increase lifespan, and lower the risks for heart disease, stroke, Type 2 diabetes, depression and certain cancers. In one study, for every kilometer (0.62 miles) walked there was nearly a 5% decrease in obesity, while every hour spent in a car was associated with a 6% increase in being obese. The Centers for Disease Control and Prevention has estimated that physical inactivity costs the United States 75 billion dollars in annual medical costs. This is close to 10% of all medical costs.

Cost of Transportation: Americans living in compact, mixed-use communities typically drive about 20 to 40 percent less than those in the suburbs and this saves on gasoline and vehicle maintenance. The American Automobile



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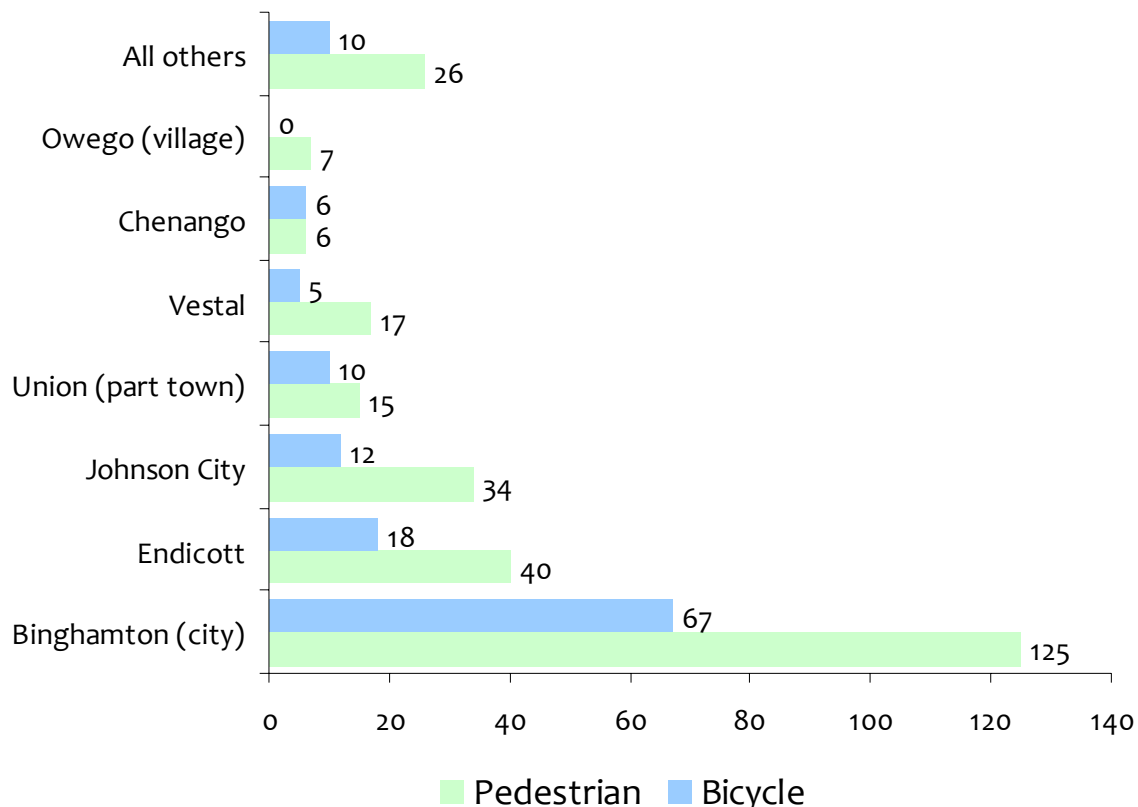
Association calculated that for 2012, the annual cost to own and operate an average sedan was \$8,946. This is compared to walking being essentially free.

Economic Benefits: Increasingly, residents look for pedestrian and bicycle amenities when buying a home or locating a business. According to a study by the National Association of Home Builders, 88% of Millennial's, or those born from 1980 to 2000, want to live in a smart growth community. Smart growth is a planning philosophy which encourages walkable design. Related to this was a nearly 30% drop in driving miles between 2001 and 2009 by this younger generation. Another study found that walkable communities had higher home values.

Unfortunately, there are areas of Broome County that are too stressful or unsafe to encourage walking or biking. According to Transportation for America 2008 report, the Binghamton Metropolitan area has the second highest pedestrian danger index

Pedestrian and Bicycle Accidents 2009-2011

BMTS Planning Area





Broome County Comprehensive Plan

Building our Future

in the state of New York, right below the Buffalo-Niagara Falls region. It is essential that these deficits are corrected for people to feel safe using alternative transportation.

Sidewalks and Roadway System

The urban core and central business districts have the highest number of roadways with sidewalks. Even in these areas, however, gaps in the sidewalk network exist. And the further from the municipal center, the gaps are more significant. Most suburban areas in the County lack sidewalks, or they do not have a continuous sidewalk network. Also, some existing sidewalks are in poor condition and/or do not meet the guidelines of the Americans with Disabilities Act (ADA).

Sidewalks can be expensive for municipalities to install, especially if it is not part of a larger street project. Property owners frequently do not want the legal responsibility for maintaining sidewalks and snow removal. On paper, many subdivision ordinances allow the municipality to request a developer to construct sidewalks. However, these provisions are rarely used to require sidewalks to be constructed in new developments.

Two Rivers Greenway

Multi-use trails are an important supplement to sidewalks and roadway pedestrian facilities. Trails provide additional connections to destinations, and in some cases, provide pedestrian access where sidewalks do not go. In 1999, the *Binghamton Metropolitan Greenway Study* was completed. The greenway study, and the 2000 *Greenway Implementation Plan*, lay out a trail system for the BMTS region. To date, almost 40% of the proposed 'Two Rivers Greenway' is either built or funded.

EXISTING TWO RIVERS GREENWAY TRAILS		
Trail Segment Name	Municipality	Length (Miles)
Owego Riverwalk	Owego (Tioga County)	0.25
Chugnut Trail – River Terrace to Riverview Dr	Village of Endicott	0.70
Vestal Rail Trail - Main St to African Rd	Town of Vestal	2.09
South Washington Street Pedestrian & Bicycle Bridge	City of Binghamton	0.10
Confluence Park	City of Binghamton	0.10
Chenango Riverwalk - Confluence Park to Court St	City of Binghamton	0.39
Chenango Riverwalk - Court St to East Clinton St	City of Binghamton	0.28
Chenango Riverwalk - Water St to Eldredge St	City of Binghamton	0.40
Chenango Riverwalk - Eldredge St to Cheri Lindsey Park	City of Binghamton	0.50
Otsiningo Park/Otsiningo Park Extension	Broome County	3.50
Port Dickinson Community Park	Village of Port Dickinson	0.75
Total Miles:		9.06



Broome County Comprehensive Plan

Building our Future

FUNDED TWO RIVERS GREENWAY TRAILS				
Trail Segment Name	Municipality	Estimated Schedule	Cost Estimate (Millions)	Length (Miles)
Vestal Rail Trail – Phase 2 Castle Gardens to North Main St	Town of Vestal	Construction 2013	\$1.637	1.62
University Trail - Bing U. East to South Washington St. Bridge	NYS DOT	In Design	\$2.522 (Design only)	1.91
Susquehanna North Trail - Confluence Park to Exchange St	City of Binghamton	Construction 2013	\$0.668	0.40
Chenango Riverwalk – Cheri Lindsey Park to Bevier St	City of Binghamton	Construction April 2013	\$0.971	0.41
Prospect St to Bevier St	NYS DOT	Phase 2 Prospect Mt.	Part of Prospect Mt	0.68
Conklin Multi-use Trail	Broome County/ Town of Conklin	Construction May 2013	\$0.590	1.40
Total Miles:				6.42

As segments of the trail system begin to connect, and to span municipal borders, it is necessary to provide uniform wayfinding, regulatory, warning and interpretive signage. To accomplish this, in 2012 BMTS hired a consultant to produce a *Sign Plan and Design Guide* for the greenway. Part of this process was branding the trail system as the ‘Two Rivers Greenway’ and preparing a logo to promote trail usage.

The full extent of the existing and funded trails is shown on the *Greater Binghamton Area Bicycle Route Map*. Printed maps are available for free from BMTS, and the map can be downloaded at <http://www.bmtsonline.com/bmts/map>.

The Two Rivers Greenway Trail continues to expand. The Village of Endicott is using Local Waterfront Revitalization Program (LWRP) funding to plan trails on the north banks of the Susquehanna River, extending the Chugnut Trail westward and providing connections to several parks including Mersereau Park, Roundtop Park, Grippen Park, the Tri-Cities Airport, Route 17C Sports Facility, and Glendale Park. Conceptual locations for trail projects have been developed at several sites. This proposed greenway expansion is identified as high priority trail in the Four Rivers LWRP for Broome County. A Request for Proposals for the study was issued during November 2012. The Broome County LWRP is discussed further in the Open Space chapter of the comprehensive plan.





Broome County Comprehensive Plan

Building our Future

BMTS and its local and regional partners are continuing to seek funding for trail projects in an effort to complete, enhance and expand the Two Rivers Greenway system.

The phased implementation for pedestrian plan is as follows:

High Priority/Short Range Actions

Pedestrian:

- Evaluate all hazardous intersections, based on accident report analysis. Based on accepted traffic engineering principles, develop and implement appropriate countermeasures.
- Construct sidewalks to provide access to all schools, including institutions of higher education, not currently served.
- Construct sidewalks along and providing access to all BC Transit bus routes.
- Complete the Two Rivers Greenway trail system.



General:

- Strengthen and expand multidisciplinary partnerships.
- Develop projects as candidates for Federal Transportation funding.
- Develop and implement a public education program emphasizing safe pedestrian and motorist interaction.
- Include appropriate pedestrian design elements in all currently programmed projects to construct, reconstruct, rehabilitate, improve, or preserve State and local highways, streets, and bridges.
- Coordinate with the New York State Department of Transportation's regional and statewide pedestrian and bicycle plans.
- Continue to collect information about the local use of the transportation system by pedestrians.
- Collect information necessary to perform annual Pedestrian Plan evaluation.
- Continue research into best practices which demonstrate enhanced safety for pedestrians.
- Promote pilot projects and special events to increase interest in walking.



Broome County Comprehensive Plan

Building our Future

Medium Priority/Mid Range Actions

Pedestrian:

- Evaluate all signalized intersections not addressed as high priority. Modify signal timing as necessary to provide adequate pedestrian green time; install pedestrian signal indications as needed per the Federal Manual on Uniform Traffic Devices; install pedestrian actuation and pedestrian phases, as well as Accessible Pedestrian Signals where needed to accommodate safe pedestrian crossing.
- Construct sidewalks to provide access to major employment centers, shopping malls and other commercial districts, parks and recreational facilities not currently served.
- Construct/install pedestrian amenities at high passenger volume bus stops.
- Create a plan for a network of riverbank/greenway paths. - **COMPLETED**

Lower Priority/Long Range Actions

Pedestrian:

- Construct sidewalks where they do not exist in high to medium density residential areas.
- Construct/install pedestrian amenities at intervening bus stops.
- Expand the Two Rivers Greenway trail system beyond the recommended trails.
- Identify a system of dedicated bicycle/pedestrian paths, including linkage of existing park and river bank facilities and rail-to-trail conversions. – **COMPLETED**

Wastewater

Approximately 70% of residences and businesses in the county are served by one of 10 public sewer plants. Wastewater capacity has long been seen as a limiting factor for development in Broome County. The perceived lack of capacity and other issues at the Binghamton Johnson City Joint Sewage Treatment plant was raised as a weakness of the county at several stakeholder meetings.

Broome County has prepared two countywide studies of this issue in the past 10 years: 'Broome County Wastewater Management' in 2002 and 'Broome County Wastewater Systems Financial Feasibility Study' in 2007. Both of those reports are available online at: gobroomecounty.com/planning/pubs In addition, the County has prepared an engineering study of wastewater issues at the Greater Binghamton Airport and the Broome County Landfill. Profiles of the two largest wastewater treatment plants and a synopsis of the engineering study of Airport Corridor are provided below:



Broome County Comprehensive Plan

Building our Future

Binghamton Johnson City Joint Sewage Treatment Plant (BJCJSTP): In 1958, the Binghamton-Johnson City Joint Sewage Treatment Plant was constructed in Vestal to serve as a primary treatment facility for the City of Binghamton. In 1963, the capacity of the plant was expanded to handle wastewater from the Village of Johnson City. Since then, various improvements have been made to the plant, mostly related to solids handling and odor control. The Joint Sewage Treatment Plant is owned by the City of Binghamton and the Village of Johnson City and it is managed by a Sewer Board which consists of representatives of these two municipalities. Currently, there are approximately 27,000 connections to the plant from users in 10 different municipalities. The distribution of connections is as follows:

Binghamton Johnson City Joint Sewage Treatment Plant Service Areas	Number of Sewer Connections
Binghamton (City)	13,975
Johnson City	5,300
Port Dickinson	724
Binghamton (Town)	831
Conklin	298
Dickinson	1,100
Fenton	351
Kirkwood	581
Union	150
Vestal (including BU)	3,558
<i>Total</i>	26,868

After large storm events, the system is burdened by large increases in inflow. During these times, storm water threatens to overwhelm the plant due to combined sewers and infiltration and inflow into the sanitary sewers. The result is discharges of untreated sewage into the Susquehanna and Chenango Rivers. In 2007, the BJCJSTP entered into a modified consent order with the New York State Department of Environmental Conservation which required the preparation of a Flow Management Evaluation Report and a Flow Management Plan. The Flow Management Plan is now in place.

The goal of a Flow Management Plan is to identify sources and reduce the quantity of flow into the wastewater system. By reducing inflow, the plant operators hope to stabilize the flow volume below the capacity of the system to minimize overflows and back ups. Plant operators expect that successful implementation of the Flow Management Plan will promote more efficient operations, reduce operational costs over time and will reduce combined sewer overflow discharges into the river thereby improving water quality.

The key component of the Flow Management Plan is the new *Modified Sewer Connection Approval Program* and related *Infiltration/Inflow Offset Bank*. Beginning January 1, 2013, any project that needs a sewer connection must apply to the local



Broome County Comprehensive Plan

Building our Future

municipality for a ‘Sewer Capacity Analysis’ and then the Sewer Treatment Board performs ‘Treatment Facilities Flow and Pollutant Load Capacity Analysis’. Projects must offset expected increases in sewer demand with an equal reduction in Infiltration/Inflow to the plant. The Sewer Board has set up an Infiltration/Inflow Offset Bank where the participating municipalities own ‘credits’ that can be allocated to new development projects. Infiltration/Inflow Offset Credits will be required for all sewer extensions. Infiltration/Inflow reduction projects can be privately or publically funded. Examples include things like green roofs and rainwater recycling which reduce storm water discharges to installing new plumbing fixtures which reduce sewer demand.

Village of Endicott Wastewater Treatment Plant: The Village of Endicott owns and operates the Endicott Wastewater Treatment Plant on Anson Road in the village. The plant was constructed in 1966 and upgraded in 1973 and 2002. It serves Endicott, and portions of Vestal and the Town of Union. There are approximately 14,200 connections in Endicott and Union and another 3,170 connections in Vestal. The Endicott plant is currently operating at approximately 80% of its design flow capacity. However, when it reaches 95% capacity it will be required by the New York State Department of Environmental Conservation to prepare a flow management plan and possibly a facility upgrade plan.

Although not under a Flow Management Plan at this time, the Endicott plant also faces Inflow/Infiltration challenges. The plant can provide more than 30 million gallons per day of primary treatment but only 16 million gallons of secondary treatment. When they receive peak flows above this 16 million gallon mark the overage bypasses the secondary treatment process and is discharged to the Susquehanna River with only primary treatment and disinfection. The plant operators are beginning to address this issue by identifying the sources of Infiltration/Inflow through an engineering analysis.

The Endicott plant will also have to address the impending Chesapeake Bay Total Maximum Daily Load (TMDL) standards for phosphorus and nitrogen discharges. The New York State Department of Environmental Conservation will soon begin reviewing discharge permits to ensure compliance with the TMDL standards. The capital cost to upgrade the plant to comply with the new standards compliance may be very high, especially to reduce nitrogen levels. The TMDL standards are discussed in greater detail in the *Water Resources* chapter.

Airport and Landfill Utility Corridor Study: Broome County owns and operates the Greater Binghamton Airport and the Nanticoke Landfill which are located in close proximity to each other in the Towns of Maine and Nanticoke. The landfill generates



Broome County Comprehensive Plan

Building our Future

an average leachate flow of approximately 40,000 gallons per day. Currently, this leachate is pre-treated onsite and trucked offsite to various wastewater treatment plants. The leachate pre-treatment, trucking and disposal costs the County approximately \$600,000 per year. The airport's onsite septic system was built in the 1960's and 1970's and is well beyond its useful life. Failure of this system would shut down the airport. In addition, the airport campus has approximately 280 acres available for development if public sewer could be provided. In 2011, the County hired O'Brien and Gere to undertake an engineering study entitled 'Airport and Landfill Utility Corridor Study' to address these issues.

Through this study, the County assessed ten options for providing wastewater treatment at these two key facilities. Two of these options were then selected for further study and refinement. Option 2B conveys combined leachate and sanitary discharges to the Endicott Wastewater Treatment Plant via Farm-To-Market Road. Option 3.1B constructs an onsite treatment facility at the Airport to handle sanitary sewer and leachate from the Landfill.

Both options handle the wastewater needs of the Airport and Landfill. However, based on life cycle costs, Option 2B is more expensive. In terms of net present worth over a 20 year time horizon, doing nothing will cost the County \$10M, Option 3.1B would be \$8M and Option 2B is \$11.4M. This includes capital costs, acquisition of necessary easements and operating costs for each options. However, Option 2B has the potential to offer wastewater treatment for parcels located along the conveyance route from the Airport to the Endicott Wastewater Treatment Plant.

Wastewater is also discussed in the *Water Resources* chapter of the comprehensive plan.

Drinking Water

Drinking water is supplied to homes and businesses via private wells or public water supplies. According to the USEPA, nationwide approximately 90% of residents receive their drinking water via a public water supply. Within Broome County, community water suppliers serve approximately 164,500 residents, or roughly 73% of the county's population. Suppliers range from individual wells for apartment buildings or mobile home parks with as few as 25 residents, up to the City of Binghamton and the Village of Endicott systems which each serve over 45,000 residents.

Community water supplies that have more than 5 service connections or regularly serves at least 25 year round residents are subject to inspection and oversight by the Broome County Division of Environmental Health in accordance with New York State



Broome County Comprehensive Plan

Building our Future

Sanitary Code. Any plans for construction, addition or modification of public water are reviewed to ensure compliance with state and federal regulations. The Division of Environmental Health monitors 187 active facilities and performs over 200 inspections annually.

There is no countywide study of drinking water needs in Broome County, but the Division of Environmental Health has prepared an informal assessment of the drinking water system for the comprehensive plan.

In the near future, new potable water wells are planned for the Village of Endicott which also serves Town of Union. Vestal and Chenango are also considering new potable wells. Longer term improvements that the Division of Environmental Health suggest including the following:

Countywide Improvements

- Require emergency generator capability at all permitted mobile home parks
- Create a County-wide water authority to have authority over community water supplies
- Require mandatory continuous disinfection at all public water supplies. Some of the smaller systems receive a waiver from the requirement for mandatory continuous disinfection.

System Specific Improvements

- Install an emergency generator at the South Street Well in Endicott
- Reestablish the interconnection between the Vestal and Endicott systems
- Create a water district for Harpursville area in the Town of Colesville
- Create a Water district on Airport Road in the Town of Maine
- Replace two potable water storage tanks in the Town of Vestal
- Install an emergency generator for Town of Union Booster Station
- Construct an additional potable water storage tank for the Village of Windsor
- Raise the village of Windsor potable water well vaults above flood level
- Add second potable water storage tank at Highland Heights in Town of Kirkwood
- Install a new water main on Dean and Wheeler Streets and new System Control Data Acquisition (SCADA) system combining water system and sewage plant in Village of Deposit
- Rebuild Johnson City main potable water wells and water plant buildings flooded during 2011



Broome County Comprehensive Plan

Building our Future

- Hillcrest: Replace back-up generator and install new pump and well motor on well #3. Install Security gate for wells. Cleaning and inspections of both potable water storage tanks. Install security cameras and lighting at wells and storage tanks.
- Town of Binghamton: Install back-up emergency generators for booster stations at Felters Road and Powers Road



Open Space

Broome County's natural beauty and abundant natural resources are consistently identified as among the area's biggest strengths. This point is continually highlighted in community planning initiatives from municipal comprehensive plans to regional waterfront and economic development planning. Public outreach during this planning process reinforced this idea with 84% of survey respondents identifying "protecting open space" as a major or minor opportunity and 88% of respondents identifying our "rivers and riverfronts" as a major or minor opportunity. In addition, this sentiment was reiterated consistently throughout the stakeholder meeting process.

Open Space is defined as:

Land that is not intensively developed for residential, commercial, industrial or institutional use, characterized by natural scenic beauty of whose natural condition or present state of use, if retained, would enhance the present or potential value of surrounding development or would maintain or enhance the conservation of natural or scenic resources.



Open spaces range from natural spaces such as forests, lakes and wetlands, to designed spaces such as parks, to working landscapes such as farms. These areas contribute not only environmental benefits such as water quality protection and wildlife habitat, they also contribute social and economic benefits, helping support the economy and make the County an attractive and healthy place to live.

Despite these values, decision makers are often forced to balance the abstract value of open space resources with more immediate pressures of tax revenues, development costs, and infrastructure spending. However, open space areas and working landscapes typically create less of a demand on community services, making them overall revenue contributors, and in the long term, can be an investment and an engine for economic development and growth. Identifying significant open spaces allows municipal agencies and others interested in open space preservation to inform planning efforts and direct development appropriately.



Broome County Comprehensive Plan

Building Our Future

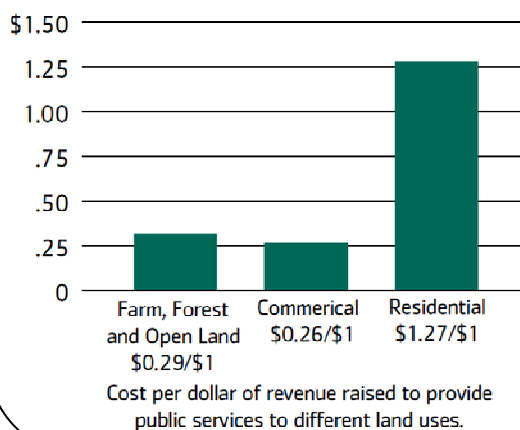
Due to an overall trend of population decline in the region, associated with limited growth, it might appear that there is no need for open space preservation and protection. However, as is discussed in the land use section, outmigration from the urban core to the more suburban and rural areas could place development pressure on these resources. Also, despite the appearance of lush rolling hills which suggest plentiful resources, the community is faced with several issues that may suggest that they aren't being managed to achieve their full benefits, including flooding, water quality issues, stressed public infrastructure and blight.

Benefits of Open Space:

- **Attract Investment** - A high quality of life attracts tax-paying businesses and residents.
- **Revitalize Urban Areas and Villages** - Stimulate growth and promote revitalization.
- **Promote public health** – Make recreational opportunities accessible to all demographics.
- **Tourism** – Supporting outdoor recreation and attracting tourists.
- **Prevent Flood Damage** – Natural resource protection offers a cost-effective alternative to expensive flood-control measures.
- **Protect the Rural Economy** - Safeguard the future of farming and rural communities.
- **Promote Sustainable Development** - Helps prevent costs of unplanned development and provides transportation alternatives.
- **Safeguard the Environment** – Protect drinking water, clean the air, and achieve other environmental goals.

New York State Cost of Community Services

From the American Farmland Trust, 2011



Furthermore, connectivity and linkages between open space areas or between open space and major activity centers, such as schools, community centers, and business districts, are essential to maximize their benefits. These connections include linear greenbelts, trails, wildlife corridors, waterway systems, and urban/rural boundary separators.

While many of the land use decisions that impact open space are made at the municipal level, there are several reasons why open space planning at the county level is important. Broome County owns and operates parks and other lands that constitute open space. The County can

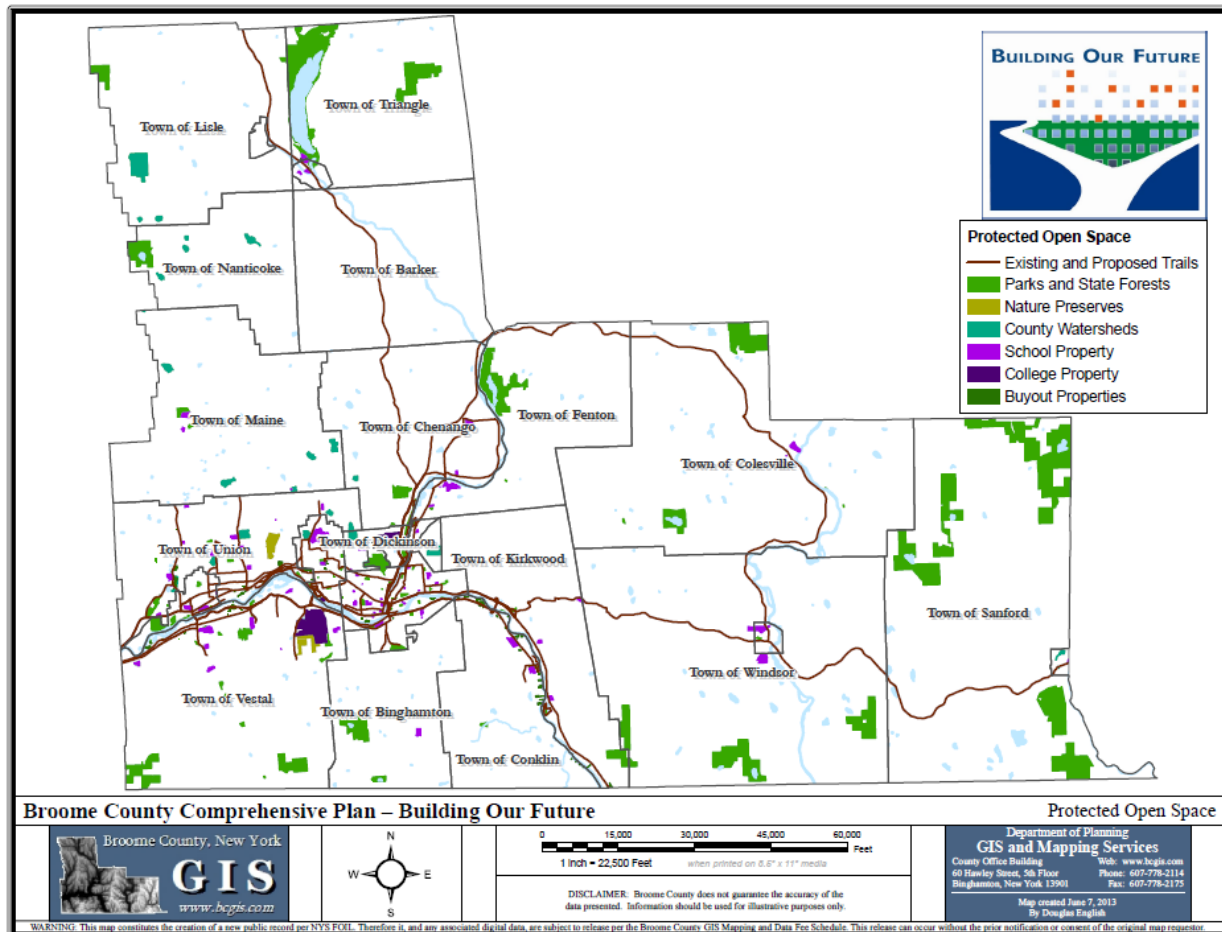


Broome County Comprehensive Plan Building Our Future

strategically plan for new recreational facilities or enhancements to existing facilities with the goal of preserving their natural resource value. In addition, County projects, programs and policies can integrate the goals established for open space preservation.

Just as we plan for our grey infrastructure including roads, sewers, utilities and others, so should we plan for our “green infrastructure”, in recognition of the community services they provide, including flood mitigation, alternative transportation corridors, and recreational amenities. Green Infrastructure planning at the County level allows for development of a system that considers these regional implications. This requires a strategic landscape approach to open space conservation, whereby local communities, landowners and organizations work together to identify, design and conserve their local land network, to maintain their healthy ecological functioning.

Furthermore, we can look at “green infrastructure” at the site specific scale which incorporates natural features, such as green roofs, bioretention areas, rain gardens, stormwater planters, and a host of other features. These serve to manage stormwater flow, and have secondary benefits associated with aesthetics, temperature regulation, community





gathering spaces, and wildlife habitats. While this section focuses mostly on green infrastructure as defined at a larger County-wide scale, these features can be an integral part of reducing the impervious areas within urban and village centers, more cohesively integrating them into the open space network.

Protected Open Space

In order to plan for open spaces, it is essential to identify what resources are already protected, providing a base for expansion of the system. Protected open space is defined as property where development is limited or prohibited by some legal mechanism due to recreational, educational, historical, or ecological significance. These include public parks, conservation areas, flood management areas, and recreation areas owned by a public agency such as a local, county or state government, including athletic fields and playgrounds owned by public schools.

Private open space may be protected if owned by a conservation group such as a non-profit land trust, or other similar entity. Conservation easements on private property, as well as subdivision laws requiring open space also afford some level of protection. Broome County contains some of these pocket size areas, but they are not well documented and therefore are not listed in this document.

Private recreational facilities, such as golf courses, campgrounds or hunting clubs can be considered open space, but are not limited from future development. Similarly, lands associated with public facilities, such as airports or municipal buildings, may be open space for now but are not protected. Documenting these temporarily protected open spaces can help to identify them as a priority for permanent protection in the future if there is an identified resource value.

Conservation laws at the state and federal level also provide specific protection for

Federal Lands	Municipality	Acreage
Parks		
Whitney Point MUA	Whitney Point/ Triangle	2833
State Lands	Municipality	Acreage
Parks		
Chenango Valley	Fenton	1028
Oquaga Creek	Sanford	1148
TOTAL		2176
Forests		
Beaver Dam	Lisle	239
Beaver Flow	Colesville	726
Beaver Pond	Sanford	785
Cascade Valley	Windsor	534
Cat Hollow State	Sanford	761
Hawkins Pond	Windsor	536
Marsh Pond	Sanford	896
Melody Hill	Sanford	1395
Nanticoke Lake	Lisle	331
Skyline Drive	Kirkwood	531
Tracy Creek	Vestal	432
Triangle	Triangle	654
Whittaker Swamp	Sanford	805
TOTAL		8625



Broome County Comprehensive Plan

Building Our Future

types of land that may be privately or publicly owned. This includes wetlands, river banks and wildlife management areas for example. These lands that offer some level of protection are addressed under other parts of this chapter or the Water Resources chapter.

The categories of protected open space are outlined further below. When living and traveling throughout the county, it is easy to make note of the vast wealth of natural resources that exists here. However, despite the recognition of their importance, only about 4.5% of County land resources are protected from development. Therefore, there is no guarantee that these highly valued resources, and the connections between them, will be maintained into the future without the appropriate planning.

Whitney Point Multiple Use Area

The largest contiguous protected open space area in Broome County is the Whitney Point Multiple Use Area. This area has been recognized as important by Federal, State and County governments, all of which have a stake in some portion of the property. The area extends north into Cortland County and is a total of 4645 acres, 2833 acres of which are in Broome.

This area contains the only federally owned open space in the County, the Whitney Point Reservoir, which is a US Army Corps of Engineers (ACE) flood control structure. Located on the Otselic River, it provides flood damage reduction for the valley along the Tioughnioga, Chenango, and Susquehanna Rivers. The reservoir and the associated open space areas are operated and managed by New York State. However, the County Parks Department runs the recreational facilities located at Dorchester Park, on the east side of the lake.

While the area is primarily operated for flood control, is also used for upland wildlife management activities such as timber harvest and the construction and maintenance of small marshes and nesting structures. In addition the land provides opportunities for hunting, fishing and boating.

State Land

The table on the previous page lists the state owned protected areas within Broome County. These include State Parks and State Forests. State Parks serve to provide regional open space and recreational value. They generally serve a large population and provide recreational opportunities that may not be

County Lands	Municipality	Acreage
Parks		
Aqua Terra	Binghamton	459.27
BAGSAI	Dickinson	31.93
Dorchester Park	Triangle	70.43
Finch Hollow	Maine	19.59
Greenwood	Nanticoke	447.38
Grippen	Endicott	18.71
Hawkins Pond	Windsor	325.66
Nathaniel Cole	Colesville	367.47
Otsiningo Park	Dickinson	149.66
Round Top	Endicott	30.04
TOTAL		1920.14



Broome County Comprehensive Plan

Building Our Future

County Lands	Municipality	Acreage
Watersheds		
NYS Route 26	Nanticoke	53.4
Mount Hunger Rd	Nanticoke	10.67
Roat Drive	Nanticoke	19.58
Howland Hill Rd	Nanticoke	22.76
Tiona Road	Maine	2.45
Caldwell Hill Road	Lisle	24.07
Caldwell Hill Road	Lisle	10.17
Laurelton Road	Union	11.91
Glenwood Road	Binghamton (City)	4.32
Second Street	Deposit	0.38
Wittman Road	Dickinson	84.04
Oakdale Road Rear	Johnson City	37.36
Pine Street	Deposit	17.47
East Maine Road	Union	18.44
Utica Street	Union	30.46
Bailey Hollow Road	Maine	46.75
Upper Stella Ireland	Maine	57.58
Airport Road	Maine	30.86
Oakdale Road Row	Maine	18.44
Avery Road	Maine	49.76
Dimmock Hill Road	Chenango	15.37
Airport Road	Dickinson	76.61
Struble Road	Union	64.54
TOTAL		707.39

accommodated in smaller local parks such as camping or cross-country skiing. New York State owns and operates two State Parks in Broome County totaling 2176 acres, Chenango Valley State Park in the Town of Fenton and Oquaga Creek State Park in the Town of Sanford.

The County contains 8630 acres of State Forest lands that typically include Reforestation Areas, Multiple-Use Areas, Unique Areas and State Nature and Historic Preserves. These lands are protected primarily for their natural resource value but are open to the public to provide passive recreation opportunities such as recreational trails, camping, and hunting. Management is guided by DEC's Strategic Plan for State Forest Management and by individual unit management plans.

County Land

Broome County has 1920 acres of park lands with the primary goal of providing high quality facilities with a wide range of activities, including swimming, camping and trail activities. Most of the parks are maintained for active

recreation purposes, but there are two parks, Aqua Terra and Hawkins Pond that are considered as natural areas for passive recreation such as hiking. Broome Community College, which is County owned also has associated open space areas and athletic fields.

In addition, Broome County operates and maintains 24 Watersheds constructed for flood control, totaling 707 acres. These are listed above. The County Watersheds are also used for recreation by the general public for hiking, sporting events and other activities. Their use for flood control is discussed in further detail in the Water Resources Chapter.

Municipal Lands



Broome County Comprehensive Plan

Building Our Future

The majority of municipally owned open spaces consist of municipal parks that range from large parks with athletic fields, playgrounds and trails to small parks or courtyards with a few trees and benches. These parks enhance neighborhoods, provide aesthetic benefits and ensure access to outdoor recreational opportunities. They are especially important in urban areas with high density residential development that affords little greenspace on individual lots. In Broome County these parks total 1794 acres. Other types of protected open space under municipal ownership include community gardens that provide the opportunities for urban gardening, and recreational areas associated with schools.

Some local municipalities also have acquired open space through the flood buy-out process. These are lands that were substantially damaged due to flooding and transferred to public ownership for the purpose of flood mitigation under the Federal Emergency Management Agency process and are restricted for any future development. These lands total 111 acres county-wide. The flood buyout process presents an opportunity for expanding upon the open space network, while contributing to local flood mitigation efforts. Goals for improving the flood mitigation potential of these lands should be a prime consideration for the open space network.

Private Conservation Lands

Broome County is also home to a couple of significant properties that have been purchased by conservation groups for their preservation. The Binghamton University Nature Preserve is a significant natural area. The University owns and manages the 182 acre preserve on the University grounds. However, the Binghamton University Foundation has also acquired additional acreage adjacent to the University property for a total of 443 acres. The property consists of a beaver pond, state and federal wetlands, nature trails and various types of wildlife habitat. The preserve is used for education, research, recreation and aesthetic purposes.

The IBM Glen is a 205 acre property in the Town of Union. The property was once owned by IBM as a recreational amenity for its employees at the IBM Country Club. Upon its closing, local conservation groups worked with the company who donated the property for



Binghamton University Nature Preserve and Foundation Lands – 443 acres



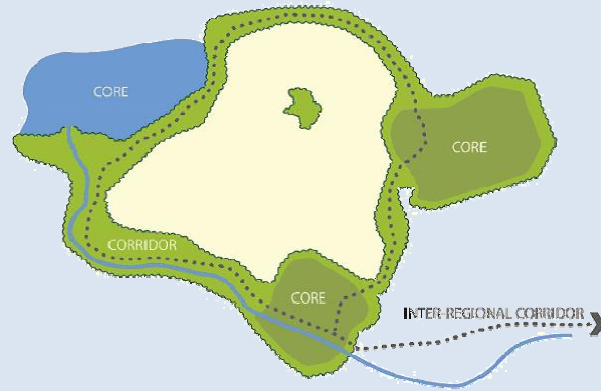
Broome County Comprehensive Plan Building Our Future

preservation. Now it is under the ownership of the Chenango Land Trust and managed by the Waterman Conservation Center, two local nonprofits with properties throughout the Southern Tier region. In addition to its historic value, it is a locally unique natural area with significant mature tree communities and a cascading gorge.

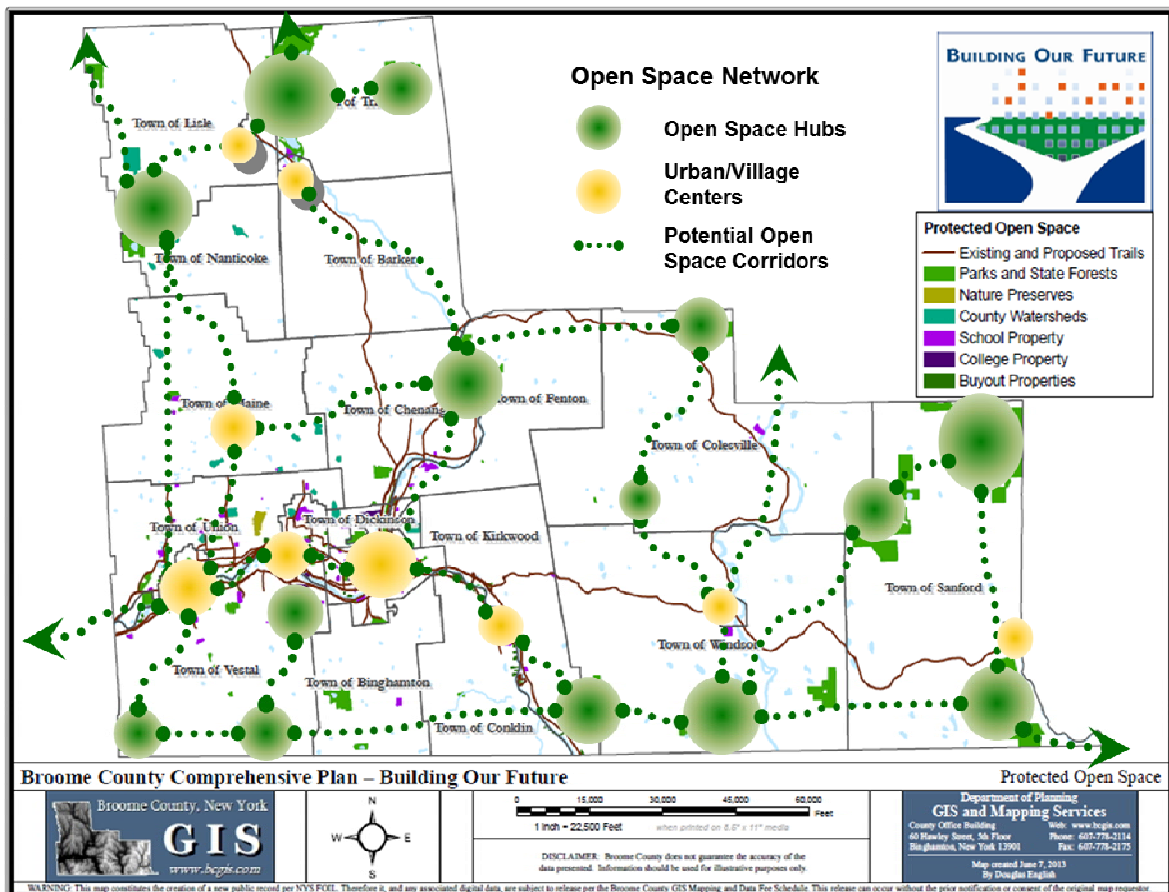
Green Corridors

As mentioned previously, connections and linkages between open space areas or between open space and major activity centers are an integral part of the open space network. These connections, or corridors, include linear greenways, trails, wildlife corridors, waterway systems, and urban/rural boundary separators.

Green Infrastructure Network



From Evaluating and Conserving Green Infrastructure Across the Landscape, 2013





Broome County Comprehensive Plan

Building Our Future

This idea has been formalized in several areas through the “emerald necklace” concept by which core open space “gems” are connected to each other and prime activity areas by green corridors. One community nearby that has employed this concept into their open space planning is Tompkins County. There, the Emerald Necklace consists of a network of open spaces that is composed of protected lands within State Forests and Parks, a Wildlife Management Area, a National Forest, land trust nature preserves, and local university properties, totaling more than 50,000 acres. This system is notable due to the fact that it doesn’t solely rely on acquisition for its expansion. It has been enhanced by partnerships and agreements with private landowners.

In Broome County, as listed in the protected open space section, we have a significant number of core open space areas. Under existing initiatives, the river systems and their tributaries serve as a natural foundation as open space corridors. They are defining features throughout the County and open space preservation associated with these features plays a prominent role in the maintenance of community health, public safety and quality of life. Therefore, several planning efforts center around the extensive water systems with the goal of planning for revitalization of riverfront areas in a manner that maintains aesthetics and water quality for the economic and quality of life benefits to the local communities.

A major initiative is the Two Rivers Greenway. In 1999 the Binghamton Metropolitan Transportation Study (BMTS) proposed a contiguous regional multi-use trail system extending from the Greater Binghamton Urban Area to the Village of Owego in Tioga County. Since then BMTS and NYSDOT have been working with local municipalities to develop trail segments with the goal of eventually creating a contiguous system. While the goal of the Two Rivers Greenway is primarily transportation oriented, it provides secondary services such as recreation, wetland protection and flood mitigation. Recently BMTS developed Signage Plan and Design Guide with the goals of increase usage of the trail system, establishing a cultural and historical identity and marketing trail adjacent tourism resources.

In addition, the Broome County Intermunicipal Waterfront Public Access Plan was recently developed. It outlines future development along Broome County riverfronts including an inventory of waterfront resources and amenities, and identifies projects for encouraging the revitalization of the riverfronts. This includes trail expansion projects, installation of boat launches, historic preservation projects and others. Municipalities have begun implementing these projects such as extension of the Chugnut trail in Endicott and the installation of a boat launch in the Town of Chenango.

The State, County and local municipalities continue to implement projects under these plans as funds are available. As the initiatives move forward they provide additional opportunities



for increasing connectivity in the open space network. However, the County does have parks and other facilities located outside the boundaries established by existing plans. Therefore, identification of additional lands and their value as open space hubs and linkages will contribute to a more complete and contiguous system, as well as establish regional connections with neighboring counties.

Open Space Resources

Having documented our protected open space, we are able to assess our needs as they relate to preserving unprotected resources or creating connectivity to maximize the benefits of open space infrastructure. Through documentation of these areas, we can make development decisions that preserve their natural, social or economic value.

Goals as they relate to open space planning include preservation of valuable lands, enhancing and developing recreational opportunities, conserving habitats, increasing access to natural resource lands and water, protecting air and water quality, maintaining and enhancing natural resource-based industries, including forestry and agriculture, discouraging

Open Space Resource Categories Defined

Recreational resources – Lands where the primary function is active or passive recreational opportunities. *Examples: Parks, boat launches, fishing areas, trails, private recreation lands (golfing, hunting, camping)*

Water resources – Lands where the primary function is the preservation of water quality. *Floodplains, flood mitigation areas, wetlands, stream buffers and lakefronts*

Ecological Communities – Lands that support native species and ecosystems to maintain local biological diversity. *State Natural Heritage areas, critical environmental areas, properties listed as Unique Natural Areas*

Geologically significant areas – Features that define the landscape's character. *Notable summits, steep slopes, glens, waterfalls or other unique water features, scenic vistas, landscapes and byways*

Historic and Cultural Resources - Historic and cultural assets supported by natural features that enhance their value and establish context in the landscape of the community. *National Register properties, community gathering spaces, archeologically significant areas.*

Working landscapes – Lands where the primary function is economic support for the landowner through natural resource-based commodities that provide secondary natural resource values. *Ag districts, prime soils, forest management areas, 480a tax exempt lands, urban gardens/trees*

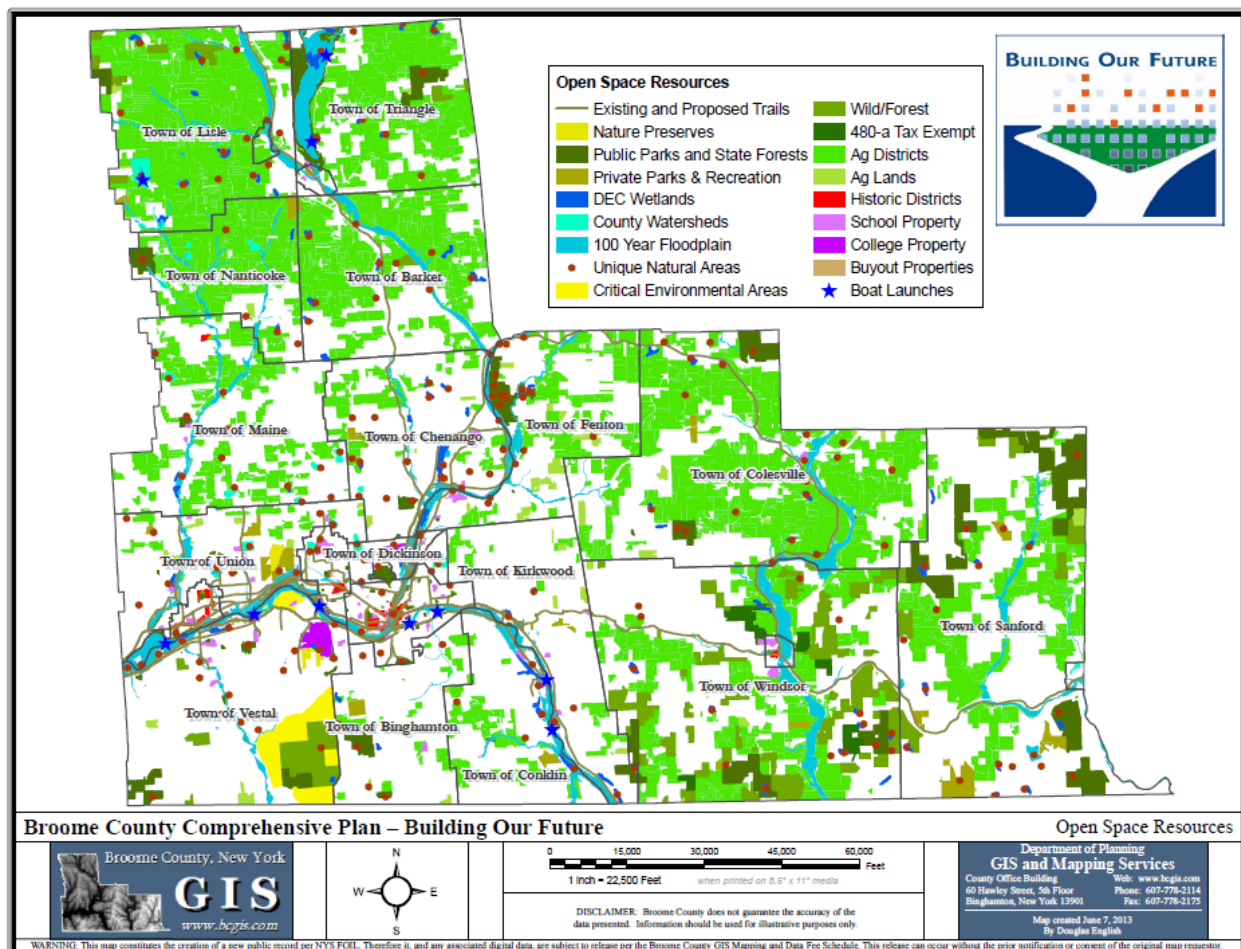


Broome County Comprehensive Plan Building Our Future

incompatible uses, and reducing inappropriate conversion of undeveloped land.

The open space categories essential to achieving these goals are defined on the previous page. By documenting areas that have value in these key categories, we are able to identify lands best suited for protection under open space initiatives, fill gaps that have been identified in the open space network, and identify opportunities for protection as resources are available. While these categories have been defined based on the resources' primary functions, it is important to remember that they may have value across several categories. Through a multi-objective planning approach that recognizes value under multiple natural resource categories, as well as economic and social values, we can maximize resources and coordinate efforts, thus gaining longer-lasting, broader support for common objectives.

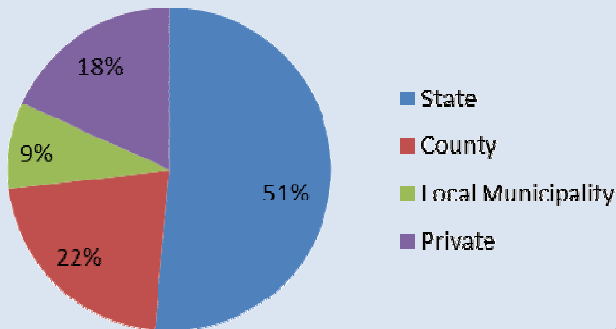
The rest of this chapter will review each of these key categories and the open space management issues associated with them. When these categories are defined and illustrated through mapping, it is clear that there are significant opportunities for further establishing an open space network that meets the varied goals of the community.





Recreation

Recreational Open Space
(% of total open space in acres)



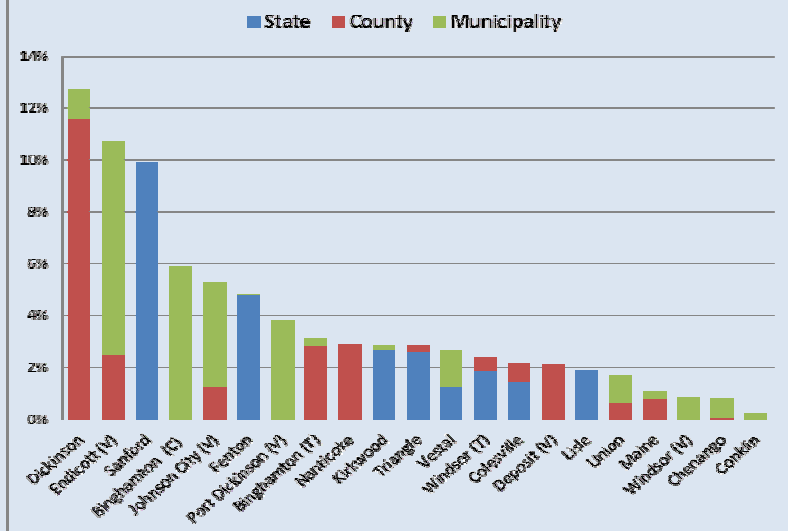
Recreational open space is a significant portion of protected open space lands due to its high value in the community for quality of life. When considering recreational open space lands in Broome County it is clear that all levels of government have played an important role with different goals for servicing the community.

Considering that almost 75% of the lands are either State or County owned, it is clear that these entities have played a major role in open space preservation throughout the county.

Due to the regional goals associated with State and County park systems, these lands tend to serve a larger population. They also may include passive recreation areas that have been acquired for natural resource management, but provide recreation as a secondary function, such as the State Forests and the Broome County Watersheds, mentioned earlier. Local municipalities tend to have a number of small park facilities for active recreation purposes. The trail systems constructed as segments of the Two Rivers Greenway are typically municipally owned and managed, unless located in an existing County park. However, these are not reflected in the data.

While it may appear that municipally owned open space doesn't make up a large portion of the recreational open space resources as a whole compared to the County and State resources, it is important to note that many of the municipal parks are located in urban areas that lack large tracts of contiguous open space, intended to serve a smaller service area. When evaluated based on a percentage of total municipal acreage,

Open Space by Percentage of Municipal Acreage





Broome County Comprehensive Plan

Building Our Future

urbanized areas such as Endicott, Binghamton, Johnson City, Port Dickinson, and others are actually relatively significant.

It is also notable that 18% of the recreational open space lands are private properties including campgrounds, hunting clubs, golf courses and athletic centers. It is clear that these are a significant portion of open space resources. Communities should make efforts to support their role in the community and to integrate them into open space planning activities and initiatives when feasible.

New York State laws protecting against alienation of parkland, the taking or use of parkland for non-park purposes, helps to prevent the loss of existing parkland. Therefore, planning as it relates to recreational resources should focus on the expansion or improvement of existing facilities with the goal of incorporating objectives under other key categories, ensuring access to park services for all demographics, and expanding upon the variety of services offered to meet changing public needs, along with the maintenance of existing facilities so they can continue to be utilized. Having a plan in place establishing the present and future goals of the parks and recreation system can help to identify these opportunities and establish a framework for tracking progress toward these goals.

In addition to the parks and recreation lands listed above there are a variety of public owned fishing sites and boat launches that serve to provide recreational access to water resources. Each year DEC releases fish to public streams, rivers, lakes and ponds across the state to enhance recreational fishing and to restore native species. Thirteen of these sites are located in Broome. Public Fishing Rights (PFRs) are permanent easements along the stream or riverbank purchased by the NYSDEC from willing landowners giving anglers the right to fish and walk there. PFRs are permanent and apply to all future owners of the property and are for fishing only, no other uses. There are two of these areas in Broome County, on Oquaga and Fly Creeks in Sanford and Deposit, and on Nanticoke Creek near the Town of Maine.

The NYS DEC and DOT along with waterfront municipalities, have worked to provide access sites to the rivers for boating and fishing purposes. Boat launches can be either hard surface ramps providing access via trailer or car top, or hand carry boat access. These can be found in the County-wide Local Waterfront Revitalization Plan which proposes the enhancement of some sites and augmentation with additional accesses. When integrated into open space planning, actions that expand upon these resources, or improve access should be taken into consideration.

Water Resources



Broome County Comprehensive Plan

Building Our Future

This category is discussed in detail in the Water Resources chapter but an overview as they pertain to open space management is provided here. As discussed, flooding has historically been a significant threat to property in Broome County. In addition, stormwater management and water quality improvements are significant management goals. From an open space planning perspective, the management of open space to mitigate the impacts of flooding and maintain water quality is a high priority. These lands include floodplains, wetlands, stream buffers and lakefronts.

Floodplains and Flood Control Structures

One of the main tools to mitigate damage associated with flooding and protect water quality is the acquisition of greenspace. This not only directly removes residents and businesses from the path of flooding, but also increases storage capacity to help restore natural flow. The publicly owned flood control lands were discussed previously under the Protected Open Space section of this chapter and include the federally owned Whitney Point Dam and associated lands, the 19 flood control structures referred to as the County Watersheds, and flood-prone properties acquired through the FEMA buyout process. These are located throughout the County and provide significant storage during storm events, slowing the flow downstream. Open space planning should focus on the expansion, addition or improvement of these existing flood mitigation properties. The requirement that these properties remain “forever green” also provides opportunities for enhancing their use as recreational assets or biodiversity value.

Wetlands

Wetlands are a valuable resource for their role in trapping and slowly releasing water, providing flood control and natural filtration of pollutants. The US Army Corps of Engineers protects wetlands that are larger than 1 acre, about 13,600 acres on the National Wetlands Inventory in Broome, 9900 when not including the surface area of the rivers. New York State protects all wetlands at least 12.4 acres in size, a total of about 2,190 acres in Broome County. A permit must be obtained for any activity proposed in or adjacent to a state or federal wetland. This leaves smaller wetlands vulnerable that may have natural resource value. Land use decisions that direct development in a manner that preserves the integrity of wetlands and their buffers can be tools in integrating private properties into the open space network.

Stream Buffers and Lakefronts

Vegetated buffers along stream corridors and lakefronts help protect their ecological value and provide recreational opportunities. In addition, they reduce the volume and velocity of runoff and floodwater, and minimize adverse conditions during periods of low flow. In general, a minimum base width of at least 100 feet is recommended to provide adequate stream protection. In Broome, about 17 mi² are encompassed in the zone within 100 feet of



Broome County Comprehensive Plan

Building Our Future

major streams. However, only about 18% of that is open space (excluding agriculture) according to the most recently available land cover data.

In addition to these water resource benefits, open spaces related to water resource protection provide unique wildlife habitats and scenic beauty, making them an asset to the community from a recreational and aesthetic standpoint. Therefore, efforts to improve the maintenance and restoration of stream buffers and wetland areas can be a large component at establishing connections in the open space system while at the same time enhancing the community's water resources.

Ecological Communities

Biodiversity, or biological diversity, is the existence of a wide range and variety of organisms in a specific landscape. Biodiversity is not only linked to the number of plant and animal species present at any given time, but it is also reliant on diversity in the ecosystems that provide habitats. Oftentimes, the impacts associated with a lack of biodiversity aren't obvious and therefore aren't a priority from a municipal perspective. However, biodiversity is extremely important when the goal is to develop diverse, resilient landscapes. Lands that are lacking in diverse ecological communities become vulnerable to disease, susceptible to invasive species and subject to overall decline.

When considered in the context of the costs associated with these factors, including damages to agricultural crops and woodlots, and the cost of mitigating disease and invasive species impacts in parks and other municipal infrastructure, it becomes clear that communities have a vested interest in maintaining their ecologically communities. This is not to mention services such as erosion prevention, aquifer protection and the formation of prime soil that are a bit more difficult to quantify. Development sited without consideration of the natural systems that provide ecological services may interfere with the continuation of these natural processes.

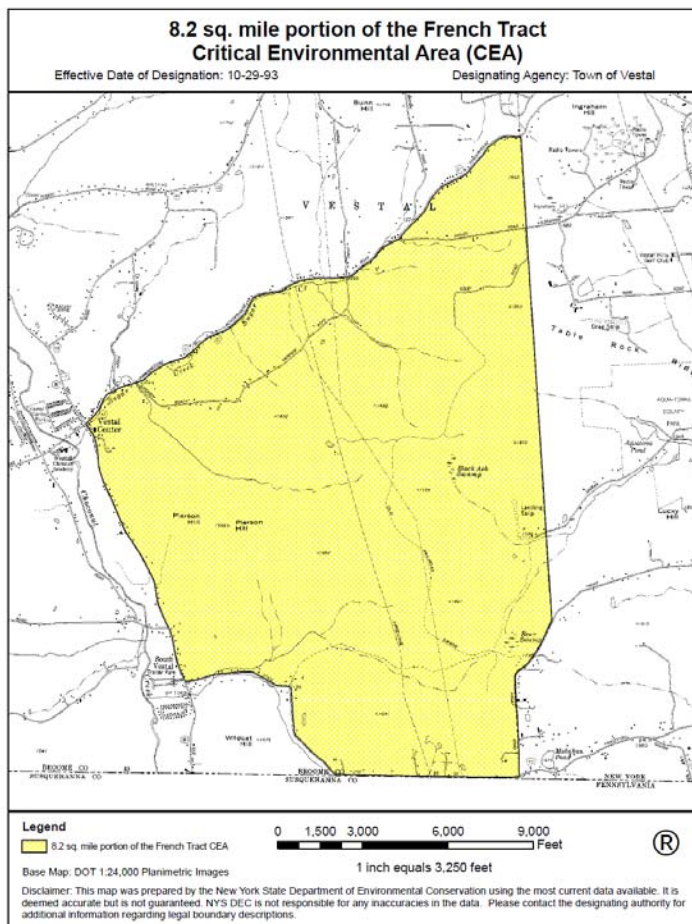
Key biodiversity areas encompass several of the other resources described in this chapter including forests, water resources, farms and forests. The land needed for ecological communities to thrive, as well as intact, interconnected habitats are the primary means to ensure the continuation of critical ecological communities and to ensure that they can continue to provide services efficiently. This entails knowing where the key habitat is and what is needed to allow the habitat to persist. This provides protection and corridors for ecological communities. There are a variety of resources at the local and state level that provide this information and can help local communities to plan for healthy ecological communities.



Broome County Comprehensive Plan

Building Our Future

New York State's Natural Heritage Program facilitates conservation of rare animals, rare plants, and natural ecosystems, and supports the stewardship of rare plants, animals, and significant natural communities, as well as reducing the threat of invasive species. The program is housed within NYSDEC's Division of Fish, Wildlife, & Marine Resources and maintains New York's most comprehensive database on the status and location of rare species and natural communities. The information is used by public agencies, the environmental conservation community, developers, and others to aid in land-use decisions. Proposed development located within areas that have been identified under the Natural Heritage Program is required to mitigate any potential impacts through the State Environmental Quality Review (SEQR) process. Communities can incorporate this information into their open space planning, making it easier to determine potential impacts and reduce delays that may be associated with this process.



Another tool that local agencies can utilize is the designation of **Critical Environmental Areas (CEAs)**. To be designated as a CEA, an area must have an exceptional or unique character with respect to certain criteria, which include value as a natural setting or open space and inherent ecological, geological or hydrological sensitivity to change. Similar to the natural heritage areas, impacts to CEA lands are subject to mitigation through the SEQR process. There are two of these areas located in Broome, both in the Town of Vestal. One is designated as having value for well recharge, but the other which is known as the French Tract was designated in part due to its ecological significance. Designation of additional areas of significant natural resource value may be a way of affording them some level of protection as part of the open space network, without outright acquisition of the properties.

At a local level, through a partnership between faculty at Binghamton University and the Broome County Environmental Management Council, a **Unique Natural Areas Inventory** has been developed County-wide. While the State keeps track of rare and endangered species



Broome County Comprehensive Plan

Building Our Future

that are of interest to them on a state-wide level, there may be natural communities that are not of interest to them, but are rare or significant from a local perspective. This database includes these significant natural communities that have been noted due to identification in the field or submission by local residents that have recognized their value. Currently this information is not publicly available, but it is housed in the County's Planning Department for reference as needed.

Geologically Significant Areas

There are a variety of features throughout the County that make up the unique landscape that the community values and tells the story of the natural history that has shaped how it looks today. These distinctive features often may not be of significant value at the state or federal levels. Therefore, local level recognition and actions are essential to maintain their natural and cultural values to the community.

Steep Slopes and Ridgelines

The rolling hills of Broome County are a major component to the scenic landscape that is an asset to the community and significant summits are attractive destinations for hikers and other types of outdoor enthusiasts. These areas are typically not attractive for development due to the plentiful steep slopes. Disturbance of steep slopes for development can be costly including increased property damage, public safety hazards and water quality issues due to erosion and sedimentation, mudslides, or localized flooding. Maintaining and repairing stressed infrastructure, demand for emergency services and expansion of municipal infrastructure are all additional costs that may result from developing in steep areas. In addition, development on steep slopes, significant summits and ridgelines may impact the beauty of our landscapes and scenic vistas by fragmenting the view of the natural landscape from key vantage points.

Significant Summit	Municipality	Elevation (ft)
Baker Hill	Vestal	1585
Beaman Hill	Triangle	1424
Bolles Hill	Vestal	1755
Bornt Hill	Union	1549
Brady Hill	Binghamton (T)	1788
Bunn Hill	Vestal	1745
Deyo Hill	Johnson City	1450
Grippen Hill	Vestal	1503
Hardy Hill	Maine	1391
Hunt Hill	Fenton	1670
Ingraham Hill	Vestal	1824
Lucky Hill	Binghamton (T)	1804
Mount Prospect	Binghamton (C)	1424
Page Pond Hill	Sanford	2008
Pierce Hill	Vestal	1385
Pierson Hill	Vestal	1644
Pigeon Hill	Fenton	1358
Pollard Hill	Maine	1512
Roundtop Hill	Vestal	1234
Slawson Hill	Sanford	2087
Tarbell Hill	Sanford	1903
West Hill	Vestal	1460
Wildcat Hill	Vestal	1575



Broome County Comprehensive Plan

Building Our Future

Despite these costs there is some development pressure on these areas as a result of the floodplain discouraging development closer to rivers and streams. Therefore, it is important to document these significant areas in an effort to direct development to minimize the impacts. There are a variety of methods including design guidelines through overlay districts or other zoning mechanisms, establishment of critical environmental areas, utilization of planned unit development districts, and preservation through acquisition or conservation easements. From an open space planning perspective, preservation of these areas provides an opportunity for expansion of the open space network for recreation or ecosystem services, while protecting against the potential impacts of development there.

Special Geological Features

There are a couple of geological features in County worth noting for their significance in the natural history of our region. One of these is Round Top Hill, whose summit is located in Vestal Hills Memorial Park Cemetery. When the current landscape was formed during glaciation, Round Top Hill sat 1,340 feet above sea level became what geologists call a “floating mountain” that appeared to drift on the surface. At Chenango Valley State Park Lily and Chenango lakes are significant geological features. These were formed when two large glacial chunks were left behind as the glacier retreated. When these thawed, they left “kettle lakes”, unique in Broome County. Further glacial activity resulted in the hill separating the two lakes forming the unique geological landscape that exists today.

While these features are currently undeveloped due to existing land use, they serve as examples of the types of sites that may not be incorporated into existing planning processes for their geological significance. Efforts to identify other significant areas and to promote these would help to raise awareness of their importance to our natural history.

Scenic Viewsheds and Byways

The County-wide LWRP, discussed earlier in this chapter, has identified several areas that are significant viewsheds and scenic areas within the LWRP boundary. According to the plan, many areas along the roadways in Broome County that offer great vistas and scenic overlooks take advantage of these areas and offer visitors and residents the opportunity to experience the beautiful scenery and geography of the area. For this context, scenic overlooks are specific to roadside pull-offs, with or without formal parking. They may be associated with trailheads, parks, or other features and offer no amenities other than informational or interpretive signage. They are typically for the enjoyment of the road traveler and help to promote the area. The recommended sites can be found in the LWRP document. Those identified focus on scenic overlooks in relation to the rivers, and therefore identification of scenic areas outside of the boundary established in that plan warrants further exploration.



Broome County Comprehensive Plan

Building Our Future

State Scenic Byways, an initiative of the NYS DOT, are transportation corridors that are of particular statewide interest, representative of a region's scenic, recreational, cultural, natural, historic or archaeological significance. Its purpose is to create themed corridors across the state with the intent of fostering economic growth and resource conservation. Currently none of the three byways in the state run through Broome County.

Several of the County's rural routes that serve as gateways between Broome and other Counties have potential as scenic corridors. These include Routes 11, 12 and 79. The Route 17 corridor has also garnered some support for recognition as a scenic byway, however, at this stage that process hasn't moved forward. While none of these are currently designated as byways, open space considerations along these corridors should be taken into consideration in recognition of their potential for such designation in the future.

Historic and Cultural Resources

When you evaluate your natural assets it is important to consider how they link to or support your historic and cultural assets. Placement of these properties within a natural setting makes them more attractive and inviting to residents and visitors. Furthermore, even if a property is officially recognized as being significant, such as on the National Register of Historic Places, it may not acknowledge the significance of a property's place within the landscape and context of the community. For example, the Binghamton Zoo at Ross Park is recognized for its cultural and historic significance in the community. However, beyond the property of the zoo itself, the surrounding parkland has provided a community gathering space throughout its history. Recognition of this and integration into the parks system has maintained this function and the associated history. By integrating it into the open space network and establishing open space linkages, we can meet the multiple objectives of historic preservation and natural resource conservation, as well as enhancing visibility and access to the community.

There are 8 nationally recognized historic districts in Broome County and 92 sites that are listed on the National Register of Historic Places, as well as several properties that are culturally or archeologically significant. The Susquehanna Heritage Area Management Plan does a full review of these resources and provides recommendations for their management. These are discussed further in the Cultural and Historic Resources Chapter, but consideration of their integration into the open space network is notable and worthy of further exploration.



Working Landscapes

Working landscapes are those in which an individual landowner provides for their own economic well-being through agricultural or other natural resource-based commodities, while at the same time enhancing their community's environmental, economic and social well-being through secondary benefits they provide. These primarily include farmlands and managed forest ranging from large, contiguous acreage devoted to a specific use, to smaller farms or niche markets, as well as urban gardens and street trees to some extent.

Working landscapes provide economic benefits by contributing to local economies directly through sales, job creation, and support services and often supply lucrative secondary markets such as food or wood processing and agri-tourism. While on a statewide basis agriculture and food sectors account for a small percentage of total output, evidence suggests that compared with other industries, farm and food related businesses make relatively large proportions of their business expenditures in-state. Therefore efforts to enhance production in these sectors produce relatively large secondary benefits for industries linked to farm and food production. Similarly, efforts to support businesses related to local wood processing, or the use of wood waste or pellets, among others, increase the profitability and therefore the productive use of the county's forests.

Indirect benefits of farms and forests include maintaining scenic, cultural and historic landscapes, enhancing local heritage, and providing recreational opportunities, such as hunting, fishing, and horseback riding, all of which support economic interest. They also provide environmental benefits such as wildlife habitat, flood control, wetland protection, and air quality protection. Since farms and forests play dual roles in the community as businesses and providing community services, efforts to create a supportive business environment and keep these lands in productive use help to ensure that the goals are met on both fronts to the benefit of both the farmers and the community at large. Long-term productive land use is highly dependent on effective stewardship and conservation through sustainable land management.





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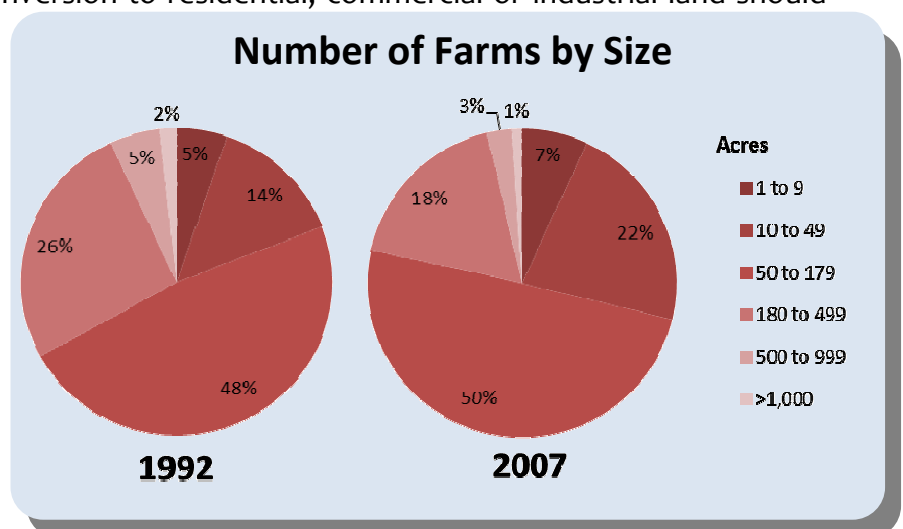
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	1992	1997	2002	2007	Change	% Change
Land in farms (acres)	97,869	85,804	98,276	86,613	-11,256	-11.5%
Avg. farm size (acres)	189	168	167	149	-40	-21.2%
Number of Farms	517	511	588	580	63	12.2%

This view highlights the significance of working landscapes in meeting our economic development and environmental management goals, and challenges the perspective that new development is the most desirable use of agricultural or forested lands land, especially in rural communities and those transitioning from rural to suburban land uses. However, across New York State, there have been continual decreases in farm acreage, with over half being lost over the past 50-60 years.

When looking at the most recent Ag Census data, Broome County exhibits similar trends. Since 1992 the total land in farms has dropped by almost 12% and the average farm size has dropped by over 20%. At the same time, the number of farms has increased by about 12%. This suggests a trend to smaller more numerous farms throughout the County. This is further illustrated when you look at the change in the total percentage of large farms since the early nineties. According to the 1992 census, 33% of farms were 179 acres or larger. As of 2007 this number dropped to 22%. While this may have impacts such as a diversification in the farming economy, from an open space planning perspective this can be problematic in that the active farmlands become increasingly fragmented. It is important to recognize that the preservation of the natural setting surrounding farm and forest land is a key part of maintaining their viability. Encroachment of other land uses as farmland becomes fragmented may result in impacts such as limiting expansion potential and erosion of the rural and natural character that supports successful farms.

While the issue of farmland conversion to residential, commercial or industrial land should not be ignored, there is little comprehensive data to suggest that it is totally linked to development of residential, commercial or industrial uses. Instead, much of the land appears to have remained vacant and reverted to natural forest cover when cropping and pasture operations were abandoned, as discussed in the land use chapter. This conversion of farmland to





Broome County Comprehensive Plan

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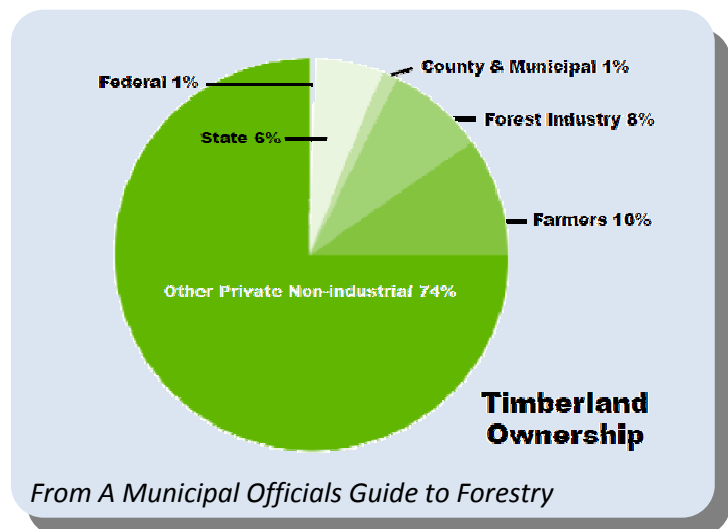
managed forests can serve as a secondary source of income to subsidize primary agricultural uses. In addition, from an open space planning perspective, the integration of managed forests into the framework of the farming landscape is a key component for maintaining the connectivity of the rural landscape.

Farmland and Forest Protection

Despite the cost of community service benefits of working landscapes, some officials still tend to treat any new construction as a net gain for the community. However, with increased interest in local farm products as a result of “buy local” programs and campaigns and the “locavore” movement, support for local agriculture is on the increase nationwide. This is advantageous since supporting local agri-business and maintaining the profitability of agricultural lands is one of the main actions that keeps farms in productive use, rather than being sold out of economic necessity. Forest lands tend to meet similar challenges that threaten to make forest management less viable economically. Therefore, it is important that these efforts treat forests and wood products in a similar manner that recognizes their economic and environmental value to the community.

When it comes to farmland protection a significant consideration is the preservation of soils that are suitable for cultivation. According to the most recent Broome County Agriculture and Economic Development Plan, the county’s natural resource base for agricultural is reasonably good, with more good to excellent soils than many areas of the Northeast. These soils encompass almost 10% of County land. According to recent land use data, almost 37,000 acres or close to 9% of lands in the county are identified as agricultural lands. Farmland protection programs focus on evaluating the status of agricultural productivity on these soils and making sure they are retained to ensure long-term viability.

The federal Forest Service defines forestland as “timberland or land that is fertile enough to produce wood as a crop and is not withdrawn from timber harvesting by statute or regulation”. While the State Forests are a significant component of managed forest lands, with 8625 acres in 13 sustainably managed forests in Broome, the majority of timberland in New York, about 90%, is privately owned by business concerns, farmers or family forest owners. According to the most recently available land use data, about





Broome County Comprehensive Plan

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24,000 acres (6% of the County's land area), are classified as wild or forested. However, there is also a significant portion of County lands, about 147,000 or 35%, that are identified as vacant. A significant portion of this land is likely wild or forested and may account for some of the lands that have converted from agricultural use to forest lands, as discussed earlier.

When integrating forest lands into the green infrastructure or open space network, it is not only important to consider the total acreage of forested lands, but also the preservation of contiguous forest tracts. Similar to farmlands, forest fragmentation is usually preceded by parcelization, when forest land is broken into smaller ownerships. Though it may stay in forest use for a time, forested areas are becoming increasingly popular for second home or retirement. Properties that are smaller than 25 acres are difficult to manage for timber values, and also lose value for other public purposes, such as recreation and biological diversity. Yet the average size of privately-owned woodlots is steadily declining. Loss of forest land base jeopardizes local forest-related businesses that cannot afford to transport timber from more distant locations to be processed. Fragmented forest patches also become increasingly more vulnerable to the impacts of invasive species that threaten the lifespan of the trees and the quality of the wood.

Actions that support the profitability of agriculture and forestry industries and make it advantageous to keep the land productive use are key tools in open space management related to working landscapes. Private land stewardship, with the support of science, financial incentives, and technical and regulatory assistance can be an effective means when it comes to these lands.

Local leaders who would appear to be most interested in maintaining the rural character of their communities take existing agricultural and forest protections for granted, and make little investment in cultivating community support for their industry. Through fostering partnerships with public agencies, private land owners and managers can be recognized and fairly compensated for the public benefits they provide. It is important to note that even though these tools are helpful on an individual parcel basis, it is essential that they are considered in a broader context in order to maximize the long-term benefits they are intended to provide.

Agricultural Districts are developed to keep farmland in active agricultural production and also serve to provide protection against laws that unreasonably restrict farm operations. The program is based on a combination of landowner incentives and protections designed to forestall the conversion of farmland to non-agricultural uses, including preferential real property tax treatment and protections against overly restrictive local laws, government funded acquisition or construction projects, and private nuisance suits involving agricultural practices. The County is responsible for designating the land to be included in these districts. Currently there are 152,449 acres of land listed within Broome's 3 Ag Districts, or 33% of the



Broome County Comprehensive Plan

Building Our Future

total area of the County, highlighting the importance of these lands in the community's economic and natural landscapes. These are very popular with farmers and provide the benefits of supporting a favorable operating environment and stabilizing large blocks of land to keep farming viable. However, they do not prevent conversion of land to nonfarm uses and tend to be more reactive than proactive. Efforts to integrate the principles of the Ag Districts into local plans and policies, including planning for the open space network, will help to ensure that the program is functioning to achieve the goals of farmland preservation and support of the farming economy.

The State's **Farmland Protection Program** provides funding sources for the purchase the development rights (PDR) on viable farmland and the development of local agricultural and farmland protection plans. Through the PDR program farmers can "cash out" of their farms without taking land out of the state's agricultural land base by selling their development rights through program. However, limitations in funding can cover only a very small proportion of the farmland that is at risk, so additional, meaningful incentives must be created and promoted. Farmland protection plans should identify the location of farmland proposed to be protected, the value of that land to the local economy, the value of that land as open space, consequences of possible conversion, and the level of conversion pressure on the proposed land. Any farmland protection board, including Broome County's, is eligible for farmland protection planning funds. Broome County's most recent plan dates back to 2001. Due to the rapidly changing agricultural landscape discussed earlier in this section, regular updates of the plan are essential to meet farmland protection goals.

New York's **Agricultural Environmental Management (AEM)** program is a statewide, locally run program of voluntary pollution prevention that helps identify and correct environmental risks to watersheds and promotes public understanding and support for agricultural/environmental initiatives. Participation in the program provides effective and confidential environmental risk assessments. Farmers and ranchers participating in AEM may receive cost sharing for implementing recommended best management practices (BMPs) that correct identified environmental risks.

When it comes to privately owned forests the primary incentive to encourage the long-term ownership of woodland is the **NY Forest Tax Program** (also known as the 480-a tax incentive). This program supports forest land retention and sustainable management by allowing forest land to be taxed at a lower forest use value rather than its potential development value. Similar to the farm tax program, this tax incentive helps make it affordable for forest land owners to keep their land in forest use. A 10-year commitment and management plan are required to receive the tax break and a minimum of 50 acres of forest land must be involved. Forest land that is part of a farm ownership that is taxed at use value may also receive reduced tax assessments. Despite the approximately 171,000 acres of lands identified as forest or vacant land earlier in this section, only 1328 acres are listed in the real



property system as receiving the benefits from this program. Therefore, work to identify and assist landowners further in managing their land should be a priority for management of the County's forest resources.

Urban Tree Management and Urban Agriculture

Smaller scale urban tree management and urban garden initiatives may not have the obvious regional impact on an individual level as some of the rural forest management and agricultural areas. However, from a local and cumulative standpoint, they are significant in the context of urban neighborhoods that have significant impervious surfaces and limited open space resources, similar to the function of municipally owned parklands.

In addition to the obvious aesthetic benefits, street trees provide benefits in an urban setting by absorbing pollutants, keeping cities cooler, providing stormwater management and providing wildlife habitat. Furthermore, the presence of street trees has been shown to increase property values and help property owners to save money by relieving energy bills. Without comprehensive data to quantify the benefits of a community's street trees, urban tree management tends to happen on a case by case basis that may not consider these cumulative benefits. Therefore, local street tree programs that establish goals for the local community are essential to maintain their benefits and guide investments in this part of the green infrastructure. Locally, the City of Binghamton's Shade Tree Commission does some of this work in a partnership between the City and its residents.

Community gardens are the concept of converting underutilized urban property into garden plots that are managed and operated by community members for their own use. Benefits include improving aesthetics, fostering community pride, stimulating development and reducing food costs. A local non-profit, Volunteers Improving Neighborhood Environments (VINES) has been working to integrate these sites throughout the urban area in the City of Binghamton, with seven sites currently operating or in development.

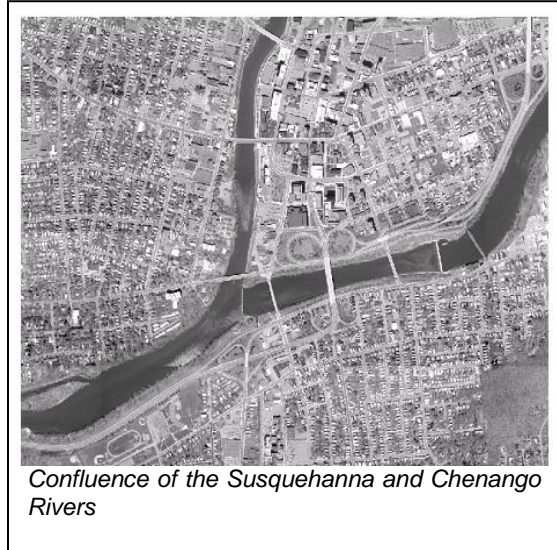
One of the major issues that came up during public outreach for this plan was the negative impact of vacant or blighted properties. Considering the population decline that has been seen in Broome's urban neighborhoods, this provides significant opportunities for the further establishment of urban gardens and trees. Furthermore, there are opportunities on productive properties where raised beds can be used for gardens on properties with poor soils or on rooftops or vacant lots. Local programs similar to those listed above can be a valuable tool for blight reduction in our urban and village centers. Support of local projects such as this, along with the community street tree programs can be an important investment in revitalizing these urban neighborhoods, improving quality of life and making them attractive for additional private investment.



Water Resources

Water resources have shaped settlement patterns in this region long before the inception of Broome County, from indigenous peoples settled along its rivers using them for sustenance, travel, and navigation to settlers who envisioned a new village at the meeting of the Chenango and Susquehanna Rivers, providing transportation and a corridor for economic development.

Since then, due to the establishment of the railroad and highway systems, the rivers have become less important as a means of transportation, but they still provide essential services. Today, the County depends on surface and ground water for drinking, recreation, industry and agriculture. Along with their associated wetlands and floodplains, they provide significant services including a healthy public water supply, groundwater recharge, sediment and erosion control, flood protection, scenic enhancement, recreation and tourism opportunities, and agricultural productivity.



Confluence of the Susquehanna and Chenango Rivers

Clearly, the provision of clean and plentiful water is essential to the success and prosperity of the County. Residents need water for drinking and daily activities, and businesses rely on water for daily operations, from industrial operations to local farms and tourism. Therefore, water resources are extremely important in county-wide comprehensive planning. The ability to provide this resource can be impacted by programs and policies at every level of government, including decisions about permitting development and where to construct infrastructure, as well as the development of zoning laws or other land use ordinances.

By extension, these decisions impact the bottom line because maintaining and preserving water resources can be expensive. Communities need to assess how to invest dollars in water quality. Should we invest public dollars on building and maintaining infrastructure or take a more proactive approach, anticipating what problems may occur and implementing programs and policies to mitigate those issues. It is essential to understand the associated costs, benefits and alternatives when making these decisions.

Properly managing our water resources is a complicated issue and can be a tremendous challenge that leaves many local communities paralyzed by the increasing complexity of regulations and technical data. Furthermore, impacts on water resources are intermunicipal



and land use and water impacts in one municipality may be seen in the water resources of their neighbor, or further downstream. In order to identify the most effective management strategies for managing water resources it is essential that we take an approach that integrated and collaborative. By examining these issues them at a County-wide scale, there is an opportunity to leverage resources and partnerships, recognizing that this is a shared resource.

This chapter aims to identify the various water resources in the county and the associated management issues that we are facing. While water infrastructure is touched upon, more information can be found in the Infrastructure chapter.

Surface Waters

There are two major watersheds located in Broome County. The majority of the County, nearly 90%, drains to the Susquehanna River, the largest river basin on the Atlantic Seaboard. There are several major tributaries in Broome including the Chenango, Tioughnioga and Otselic Rivers and major streams such as Occanum, Choconut, Nanticoke, and Castle Creeks. The remaining 10% of the County is located in the Delaware River watershed, along a small portion of Broome's south-eastern boundary. The Delaware's main tributary in Broome is Oquaga Creek.

There are two significant lakes in Broome County. Whitney Point Reservoir, the largest lake in the County, drains 255 square miles and is a US Army Corps of Engineers (ACE) flood control structure located on the Otselic River. Oquaga Lake, located in the eastern portion of Broome, is 134 acres. Other small lakes and ponds are scattered throughout the area.

The NYS DEC has designated parts of the Susquehanna River in Broome County as "Class A" indicating that its highest and best use is for water supply for human consumption. A significant portion of the City of Binghamton, along with some of the neighboring communities that tap into their system, depends on these surface waters for consumption, amounting to about 20% of the public water use in the County.

Streams

All waters of the state are provided designation based on best usage of each waterway. AA or A are waters best used as drinking water, B for swimming and other recreation, C for waters supporting fisheries and the lowest classification is D. The NYS DEC requires a permit to alter the banks or bed of a protected stream, those classified as C or better. As stated previously parts of the Susquehanna are designated as Class A. All others in the County are Class C or better. Waters may also have a standard of (T) or (TS), indicating that they may



Broome County Comprehensive Plan

Building Our Future

support a trout population or trout spawning. These waters may have additional permitting requirements. In Broome County Dudley, Nanticoke and Oquaga Creeks are listed with this designation.

In general, stream buffers of at least 100 feet are recommended to provide adequate stream protection. About 16.8 square miles in the County are encompassed in the zone within 100 feet of major streams. In addition, maintaining vegetated buffers around lake shores can help maintain the water quality of these systems.

Aquifers

In Broome County, about 80% of water for public use in comes from ground water sources. There are several aquifers located beneath the Susquehanna River, the Chenango River and their surrounding floodplains. These are referred to as unconsolidated aquifers, characterized as having frequent discharge/recharge with the streams that lie above them. Bedrock aquifers are common in rural parts of the County, which are hydrologically isolated from large streams and hold water in fractures in the bedrock.

Aquifers are classified based on importance as a public water supply, productivity, and vulnerability to pollution. Johnson City, Endwell, Endicott, and Vestal are dependent on primary aquifers (highly productive, vulnerable aquifers being used, mainly as a water supply, by a large percentage of residents). There are also a number of principal aquifers which are classified as highly productive, but used by a lower percentage of the population.

In addition, all of Broome County that is contained within the Susquehanna River Watershed is federally designated by the Environmental Protection Agency (EPA) as a sole source aquifer, the Clinton Street-Ballpark Aquifer System. Sole source aquifers are those supplying 50 percent or more of the area's drinking water, which, if contaminated, would create a significant hazard to public health and could not be replaced by another source. This designation ensures that an environmental review will occur for development projects involving federal financial assistance. These include highway improvements and new road construction, public water supply wells and transmission lines, wastewater treatment facilities, and others.

Floodplains

Flooding has historically been a significant threat to property in Broome County, with multiple significant flooding events, including two historic floods in June of 2006 and September of 2011. The Federal Emergency Management Agency has recently gone through the process of updating the floodplain maps in Broome County. According to these new



Broome County Comprehensive Plan

Building Our Future

maps, about 26 square miles in Broome County, lie within the Special Flood Hazard Area, the area inundated by a flood having a 1-percent chance of occurring in any given year, and another 3.7 square miles is located in the 500-year floodplain. This includes several urbanized areas, which makes flooding a primary concern for the region.

Wetlands

Any development impacting wetlands requires a permit from the state or federal government. Wetlands are periodically or permanently flooded areas that support plant and animal species adapted to living in those conditions, including swamps, bogs, marshes, and ponds. They function to trap and slowly release surface water providing natural flood control often otherwise provided by expensive dams and levees. Wetlands and their buffers are also important to protect water quality and hydrology.

There are approximately 2,190 acres of state designated wetlands in Broome County. New York State protects all wetlands at least 12.4 acres in size. Smaller wetlands may be protected by the State if deemed locally unusual or important.

The US Army Corps of Engineers (ACE) has the authority to protect wetlands that are larger than 1 acre. There are about 13,600 acres (21.25 mi²) listed on the National Wetlands Inventory, protected by the federal government, including the Susquehanna, Chenango and Tioughnioga Rivers which comprise 3700 acres. The surface acreage of all other federally protected wetlands is about 9900 acres (15.5 mi²).



Management Issues

When considering water resource management issues it is important to remember that the relationship between surface water and groundwater are not isolated from one another. Water moves through gravel layers underlying the river or stream beds between the two. Similarly, land is connected to water systems through wetlands and floodplains. These provide valuable services that help to naturally maintain healthy water resources including storing and slowly releasing surface water, reducing flood peaks and velocities, reducing erosion, reducing sediment and filtering nutrients and impurities, promoting infiltration and aquifer recharge, and reducing the frequency and duration of low flow. In turn, they enhance wildlife diversity and increase recreation and tourism opportunities.

This section aims to identify those management issues that are currently facing Broome County. It also examines the actions being taken to deal with these issues by various agencies or organizations at all levels from local to federal initiatives.

Water Monitoring and Reporting

At the state level, New York maintains several lists intended to track the status of water quality and meet Federal requirements. They use these to help set statewide priorities for programs and funding. As a result, when setting local priorities it is prudent to take these into consideration as they may be priorities for state programs and funding opportunities. Furthermore, some of the listings may be associated with regulatory requirements intended to improve the identified water quality issues. While it is important to take these into consideration, it is also important to note that it is essential for local municipalities to look at their own priorities and local knowledge as well when considering associated actions. Often additional requirements are integrated into existing water quality programs that are included in this chapter. Therefore, programs are ever changing to meet varying circumstances and new issues as they arise.

State programs intended for the assessment and monitoring of water quality issues include the following:

- Priority Waterbodies List (PWL) – This list characterizes information on general water quality, the degree to which designated uses are supported and identify water quality issues.
- NYS Water Quality Report (Section 305(b) Report) – This is based on a federal requirement that states are to submit a report on the quality of waters in their state every two years. It is a compilation of water quality assessment information contained in all PWL Basin Reports.



- List of Impaired/TMDL Waters (Section 303(d) List) – Section 303(d) of the Clean Water Act requires states to compile and submit a list of waters that do not meet water quality standards and thereby do not support their designated uses. This results in the development of a Total maximum Daily Load (TMDL) or other appropriate strategy to restore the water use.

Flooding

While being located in a scenic river valley is a valuable asset to Broome County, the tendency toward flooding creates a hazard to its communities. History has shown the Susquehanna River Basin to be one of the most flood-prone regions in the nation. Higher gradient streams in the lower basin and highly erodible soils result in frequent flash flooding and excessive erosion. Recently, Broome County has been subject to multiple major flooding events which have received federal disaster declarations. The County suffered historical river flooding in June of 2006 and again, only five years later, in September of 2011, both of which received a federal disaster declaration. Flooding due to high river levels is not the only concern, there have also been impacts related to ineffective drainage and flash flooding, most significantly during November of 2006, which also received a federal disaster declaration.

Locally, flooding events have had devastating community impacts. These include immediate impacts such as the displacement of residents and business, and the endangerment of public health and safety. There are long term impacts including economic hardships for residents, businesses and local municipalities, damage to local infrastructure and negative impacts on local economies. Environmental impacts include disrupted wastewater treatment for wastewater treatment plants and private septic systems, as well as the threat of chemicals and other pollutants washed away from flooded commercial and industrial properties.

Currently there is a significant system of publicly owned flood control structures that are operated and maintained within the County. There are several federally owned flood control structures within the County, located in the City of Binghamton, Towns of Union and Vestal, and the Villages of Endicott, Johnson City, Lisle, Port Dickinson, and Whitney Point. These structures were federally built by the US Army Corps of Engineers, and are maintained by the NYS Department of Environmental Conservation. In addition Broome County owns and maintains twenty-four flood control structures, referred to as “watersheds”.

In addition to these structural flood mitigation measures, local communities have also incorporated floodplain ordinances into their local code. These ensure that development within the floodplain is built to acceptable standards, minimizing impacts to the structure or



Broome County Comprehensive Plan

Building Our Future

neighboring properties, and discourage inappropriate land use in the floodplain (i.e. businesses dealing with hazardous chemicals). Local communities have also participated in the acquisition of properties substantially damaged during flooding events. Development is prohibited on these properties, thus removing vulnerable structures and aiding in flood mitigation.

There are several County lead initiatives that aim to provide information and guidance for reducing flooding impacts in our community. The goal is to prevent the loss of property and life through mitigation actions. One of these is the development of a County-wide Hazard Mitigation Plan. In order to receive funding for hazard mitigation projects from the Federal Emergency Management Agencies (FEMA) communities are required to have a FEMA approved hazard mitigation plan in place outlining a strategy for reducing vulnerability to hazards. While the plan addresses all hazards, the primary focus is on flooding. The plan was originally adopted in 2008, with the most recent update completed in early 2013. The Broome County Department of Planning and Economic Development led this planning process with cooperation from all 24 Broome County municipalities. The most recent plan focuses on specific projects with measurable impacts flooding and other hazards.

Broome County Planning also coordinates a group called the Flood Task Force. This group has representatives from local, state and federal government, including engineers, Soil and Water Conservation District staff, code officers and elected officials. The group serves to educate its members on topics related to flooding such as flood map amendments, flood insurance, and mitigation funding programs, as well as advocating for changes in federal and state regulations related to flood policy and hazard mitigation.

Stormwater

There is a history of flash flooding and poor drainage in Broome County which exacerbates flooding events due to high river levels. Furthermore, localized flooding and erosion problems lead to significant damage to infrastructure and property during less significant storm events, most notably in the federally declared event in November of 2006. Improperly managed stormwater is a leading cause of flooding and erosion, which can lead to property damage, cause road safety hazards, and clog catch basins and culverts with sediment and debris. In addition it carries materials and pollutants from paved surfaces to our waterways. This can degrade the quality of drinking water, damage plant and wildlife habitat, and makes water resources generally unsuitable for consumption, recreation, or other uses.

In order to minimize these stormwater impacts New York State, as a requirement under federal regulations, has issued three State Pollutant Discharge Elimination System (SPDES) general permits required for activities associated with stormwater discharges.



Broome County Comprehensive Plan

Building Our Future

- One of these requires permits for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas. MS4 refers to a stormwater conveyance or system of conveyances owned or operated by a public body (i.e. state, city, county, or district). Permittees are required to develop Stormwater Management Program (SWMP) and submit annual reports to the State. There are 14 municipally operated MS4s in Broome County; City of Binghamton, Town of Binghamton, Chenango, Conklin, Dickinson, Endicott, Fenton, Johnson City, Kirkwood, Maine, Port Dickinson, Union, Vestal and Windsor.
- Construction activities disturbing one or more acres of soil must be authorized under the General Permit for Stormwater Discharges from Construction Activities. All municipalities are responsible for ensuring that local projects are adhering to the conditions of the general permit.
- The Multi- Sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP) addresses stormwater runoff from industry specific activities, including wastewater treatment plants.
- Special requirements apply when stormwater is discharged to a water body identified on the New York State 303(d) list or covered by an EPA-approved Total Maximum Daily Load (TMDL), used to identify waters where designated uses are not fully supported by existing water quality. Water bodies in Broome County that are currently listed on the 303(d) list are Whitney Point Lake (Triangle), Fly Pond and Deer Lake (Sanford).

Broome County and all other municipally operated MS4's, as identified above, along with Tioga County and the Town of Owego have an intermunicipal agreement in place to work together on stormwater issues through the Broome-Tioga Stormwater Coalition. The group works together to share information and collaborate on ways to meet the requirements set forth in state and federal stormwater regulations. This includes utilizing mapping resources, collaborating on annual reporting, working together to develop education and outreach materials, and the development of local laws and ordinances.

One of the most recent issues is the incorporation of green infrastructure practices into the NYS Stormwater Design Manual and stormwater regulations. These are strategies that maintain or restore the natural flow pattern by allowing water to slowly permeate into the ground. The idea behind using these strategies, including rain gardens, bioretention areas, vegetated swales, green roofs, porous pavement, et cetera, is that they will be less costly to maintain than traditional grey infrastructure project managing stormwater. The design manual provides designers with information on how to size, design, select, and locate stormwater management practices at a development site to comply with State stormwater performance standards. However, barriers to their incorporation locally include regulatory limitations in local codes and a lack of familiarity with these strategies, limiting local progress.



Wastewater

Wastewater consists of domestic or sanitary wastewater, coming from residential sources with the primary concern being disease organisms, and industrial wastewater, discharged by manufacturing processes and commercial enterprises, potentially containing chemicals and other waste products used in their processes. Effective wastewater treatment is essential to ensure that these waste products do not reach local water bodies, creating concern for public health and safety and other water quality problems.

Wastewater treatment plants in Broome County primarily serve the Binghamton metropolitan area with the exception of several small systems in the eastern part of the county. There are a total of ten wastewater treatment plants located in the County, the Binghamton-Johnson City Joint Plant having the largest capacity. There are also plants located in the Village of Endicott, Town of Chenango, Village of Deposit, Town of Sanford, Town of Windsor, Town of Fenton, Town of Binghamton and Village of Whitney Point.

A major issue for the communities dependent on these treatment facilities is proper planning and decision making to ensure the plant's capability to discharge increased volumes of wastewater necessary for growth. This is especially an issue for Binghamton-Johnson City plant which services a large portion of the population, and also has a system with several Combined Sewer Overflows (CSOs). CSOs collect runoff, domestic and industrial wastewater in the same pipe. As a result during periods of heavy rainfall, capacity may be exceeded causing the excess to overflow directly into the receiving waterbody without treatment.

Another major issue for local wastewater treatment plants is ensuring that systems are upgraded to accommodate changing and new State and Federal regulations regarding new contaminants or acceptable levels of known contaminants. This can be a very costly endeavor, especially for the smaller, more remote plants.

A major wastewater management issue that is being dealt with at the Binghamton-Johnson City Joint Sewage Treatment Plant (B-JC STP) is the development of the Flow Management Plan, completed in 2012. The Flow Management Program as described in the plan is in response to a 2007 Consent Order from the NYS Department of Environmental Conservation. While the plan found that the collection systems are currently in compliance with NYS permits, the purpose of the program is to proactively manage wet-weather wastewater flow so that levels do not exceed the design and treatment capacity of the plant in the future.



Broome County Comprehensive Plan

Building Our Future

The plan is intended as a tool to enhance economic development opportunities and community growth while promoting more efficient use of current capacity. The four major components of the plan to remain in compliance with discharge permits are a sewer connection application program, an offset program requiring an equal amount of infiltration and inflow removal for any added flow, a Capacity, Management, Operation and Maintenance Program to help municipal users operate and maintain their sewage collection systems, and a Treatment Management Plan to forewarn of potential noncompliance events and correct them. The plan will be implemented sometime in 2013 or 2014 pending state approval.

Private septic systems are the primary method for sewage disposal in more rural and suburban parts of the County. The Broome County Health Department permits, monitors and documents all new and replacement septic systems to ensure they function according to the Broome County Health Code. A faulty septic system can cause impairments to water quality and aesthetics. Violations due to faulty septic system are regulated by the Health Department who ensures that these systems are brought back up to code.

Agriculture

Poor agricultural practices can pose a threat to water bodies through the discharge of fertilizers, wastes and chemicals from farming operations to surface waters or through the loss of soils most suitable for farming. New York's Agricultural Environmental Management (AEM) program was developed to identify and correct environmental risks to watersheds and promote public understanding and support for agricultural and environmental initiatives. The AEM program consists of problem identification, planning, and implementation of environmental stewardship practices, effective and confidential environmental risk assessments, and cost sharing for implementation of best management practices to correct identified environmental risks.

AEM not only promotes environmentally sound agricultural practices, but aids compliance with water quality regulations impacting agriculture. Concentrated animal feeding operations (CAFOs) are agricultural facilities where large numbers of animals are kept within a much smaller area than traditional pasture operations. The concentration of the wastes from these animals increases the potential to pollute water and impact the environment. CAFOs are considered to be point sources under the federal Clean Water Act, and thus, must obtain a discharge permit. The NYSDEC has agreed to implement a general SPDES permit program for regulating CAFOs. All CAFOs covered by a general permit are required to have a site specific Certified Nutrient Management Plan (CNMP) developed in accordance with the Natural Resources Conservation Service (NRCS) that must be certified by NYSDEC.



Chesapeake Bay TMDL

The Chesapeake Bay watershed covers 64,000 mi², and includes portions of 6 states and the District of Columbia. The headwaters in the Upper Susquehanna watershed in New York include Broome County. Due to significant degradation from excess pollutants, a federal executive order was issued directing the US Environmental Protection Agency (EPA) to reduce pollution entering the Bay. The EPA, through the Chesapeake Bay Program, developed a total annual allocation for nitrogen (N), phosphorus (P) and sediment considered the maximum that the Bay can receive and meet water quality standards, a Total Maximum Daily Load or “TMDL”.

Primary nutrient sources are sewage, cattle manure, inorganic fertilizer and atmospheric nitrogen, and primary sediment sources are agriculture, stream bank erosion and construction. All states (and the District of Columbia) in the watershed were required to submit Watershed Implementation Plans (WIP) to meet the target allocations and provide reasonable assurance that reductions will be achieved and maintained by 2025. If not, the EPA will institute backstops (actions to ensure progress), including program review, denying permits, and targeting compliance and enforcement actions as necessary to meet water quality goals.

New York's Phase I WIP was developed and submitted by the NYS Department of Environmental Conservation (DEC) in cooperation with the Upper Susquehanna Coalition (USC) in September 2010, and in January of 2013 New York's final Phase II WIP was submitted to the EPA. USC, NYSDEC, Soil and Water Conservation Districts and other agencies have begun implementing the WIP, tracking progress and reporting to the EPA. In Phase II New York expended considerable effort to determine the best balance of load reductions among the agriculture, wastewater and stormwater sectors, impacting many of the issues noted above. Reductions in agricultural loads represent the greatest proportion of the total controllable load from New York and the most cost effective reductions. Wastewater reductions will be implemented through robust legal requirements (numeric effluent limits) to meet numeric nutrient criteria. Reductions in stormwater load through retrofit requirements are by far the most cost intensive and are a very small proportion of the total New York load and therefore will not be the major focus of Phase II.

Natural Gas Drilling

As a result of the increased accessibility of natural gas due to advances in technology, natural gas production is expected to increase in the near future pending the completion of state level studies and approval of state regulations regarding the drilling technique referred to as hydrofracking. While it is difficult to assess what programs and policies will be



Broome County Comprehensive Plan

Building Our Future

implemented prior to the establishment of policy at the state level, there are several aspects of water resource management that may need to be addressed as the process moves forward.

- Water Consumption - Due to the nature of the drilling process, water withdrawals and consumptive uses require monitoring to ensure that surface and ground water levels are adequately maintained. The Susquehanna River Basin Commission (SRBC) regulates all water withdrawals and consumptive water uses within the Susquehanna basin for natural gas. Prior approval from SRBC through an application process is required.
- Water Quality - The NYS Department of Environmental Conservation (DEC) has developed draft regulations that are intended to protect against water contamination. These include mandated casing and cementing program for each well to prevent the flow of oil, gas or salt water underground and setbacks from municipal water wells, surface water bodies and streams.
- Wastewater Disposal – Wastewater, also known as flowback water, resulting from hydrofracking that is not recycled, requires proper disposal due to contamination that occurs during the process. According to recommended regulation the NYS DEC will permit the disposal of flowback water associated with natural gas development. Measures include a required DEC-approved plan for disposal of flowback water and production brine, monitoring through drilling and production waste tracking, and treatment capacity analysis for water treatment facilities that wish to accept flowback water, along with a contingency plan.

While the role of local municipalities in the water resource management associated with increased natural gas development in this region still remains unclear, awareness and education regarding water management policies and programs among local municipalities and agencies, as well as residents and businesses is key as this process moves forward.



People

The eight-county southern tier region of the State has a population of 658,000 or less than 4 percent of the total statewide population. Within this largely rural region, Broome County is the largest at 200,600 residents or 30 percent of the southern tier's population.

From the end of World War II through 1970, Broome County's population grew substantially. This coincides with dramatic growth in local technology companies such as IBM and Link Aviation. The population in 2010, however, is well off its peak in 1970. But in the last decade, this long term decline was stemmed as Broome County's population held steady. New York State, however, grew over 2 percent during this decade, and Tompkins County, the second largest county in the region, grew by over 5 percent from 2000 to 2010.

The Binghamton University Effect:

Population and median age figures are skewed in several instances due to the phenomenal growth of Binghamton University over the past decade. Because the Census is calculated based on where you reside on April 1, students at BU are counted as local residents. This effect is most pronounced in the median age for Vestal which is substantially lower than other suburban towns in Broome County.

Population from 1950 to 2010: State, Region and Counties										
Area	1950	1960	1970	1980	1990	2000	2010	Percent Increase		
								1950-2010	1990-2000	2000-2010
State	14,830,192	16,782,304	18,242,584	17,558,165	17,990,455	18,976,457	19,378,102	30.7%	5.5%	2.1%
Region	549,992	614,851	654,298	661,272	670,532	657,297	657,909	19.6%	-2.0%	0.1%
Broome	184,698	212,661	221,815	213,648	212,160	200,536	200,600	8.6%	-5.5%	0.03%
Chemung	86,827	98,706	101,537	97,656	95,195	91,070	88,830	2.3%	-4.3%	-2.5%
Chenango	39,138	43,243	46,368	49,344	51,768	51,401	50,477	29.0%	-0.7%	-1.8%
Delaware	44,420	43,540	44,718	46,824	47,225	48,055	47,980	8.0%	1.8%	-0.2%
Schuyler	14,182	15,044	16,737	17,686	18,662	19,224	18,343	29.3%	3.0%	-4.6%
Steuben	91,439	97,691	99,546	99,217	99,088	98,726	98,990	8.3%	-0.4%	0.3%
Tioga	30,166	37,802	46,513	49,812	52,337	51,784	51,125	69.5%	-1.1%	-1.3%
Tompkins	59,122	66,164	77,064	87,085	94,097	96,501	101,564	71.8%	2.6%	5.3%

Changes at the local level were far more dramatic. From 1950 to 2010 the urban center - City of Binghamton and Villages of Endicott and Johnson City - lost population while the suburban and rural towns gained population. The City of Binghamton alone lost 33,298 residents or over 40 percent of its population. In contrast, nearly all of the towns experienced substantial increases in population since the end of World War II. The Town of Vestal had the largest increase, more than tripling to over 19,000 residents in 2010. These dramatic changes are shown on the map of Population from 1950 to 2010: Broome County Municipalities.



Broome County Comprehensive Plan

Building our Future

In the most recent decade, the City of Binghamton's population held even. During this time, the Town of Vestal population increased by over 1,500 residents, while the Town of Conklin experienced the largest decline in absolute and percentage terms, losing 499 residents or over 8 percent of its population. This is most likely due to the major 2006 flood.

Age

Over the past decade, New York and every southern tier county grew older. The Broome County median age increased just over 5 percent, slightly less than the statewide increase. Schuyler and Chenango counties aged at the fastest pace, both experiencing double-digit increases to their median age in the last decade. Today Delaware County has the highest median age (over 45) in the southern tier and Tompkins County has the lowest (under 30).

Median Age in 2000 and 2010: State, Region and Counties				
Area	2000	2010	Change	
			Years	Percent
State	35.9	38.0	2.1	5.9%
Broome	38.2	40.2	2.0	5.2%
Chemung	37.9	40.9	3.0	7.9%
Chenango	38.4	42.9	4.5	11.7%
Delaware	41.4	45.4	4.0	9.7%
Schuyler	38.8	44.2	5.4	13.9%
Steuben	38.2	41.4	3.2	8.4%
Tioga	38.0	42.5	4.5	11.8%
Tompkins	28.6	29.8	1.2	4.2%

From 2000 to 2010 all of the towns except Vestal experienced an increase in the median age, some quite substantially. Conklin's median age grew the most (6 years and over 15 percent). In contrast, the City of Binghamton and most of the villages experienced decreases in the median age or increases similar to the countywide increase.

In 2010 Fenton, Chenango, Sanford and the Town of Binghamton all had median ages over 44. Vestal is the town with the lowest median age at under 31. The villages tended to have lower median ages than the towns; the Village of Lisle was the lowest at approximately 33 and the City of Binghamton was almost 36.



Broome County Comprehensive Plan

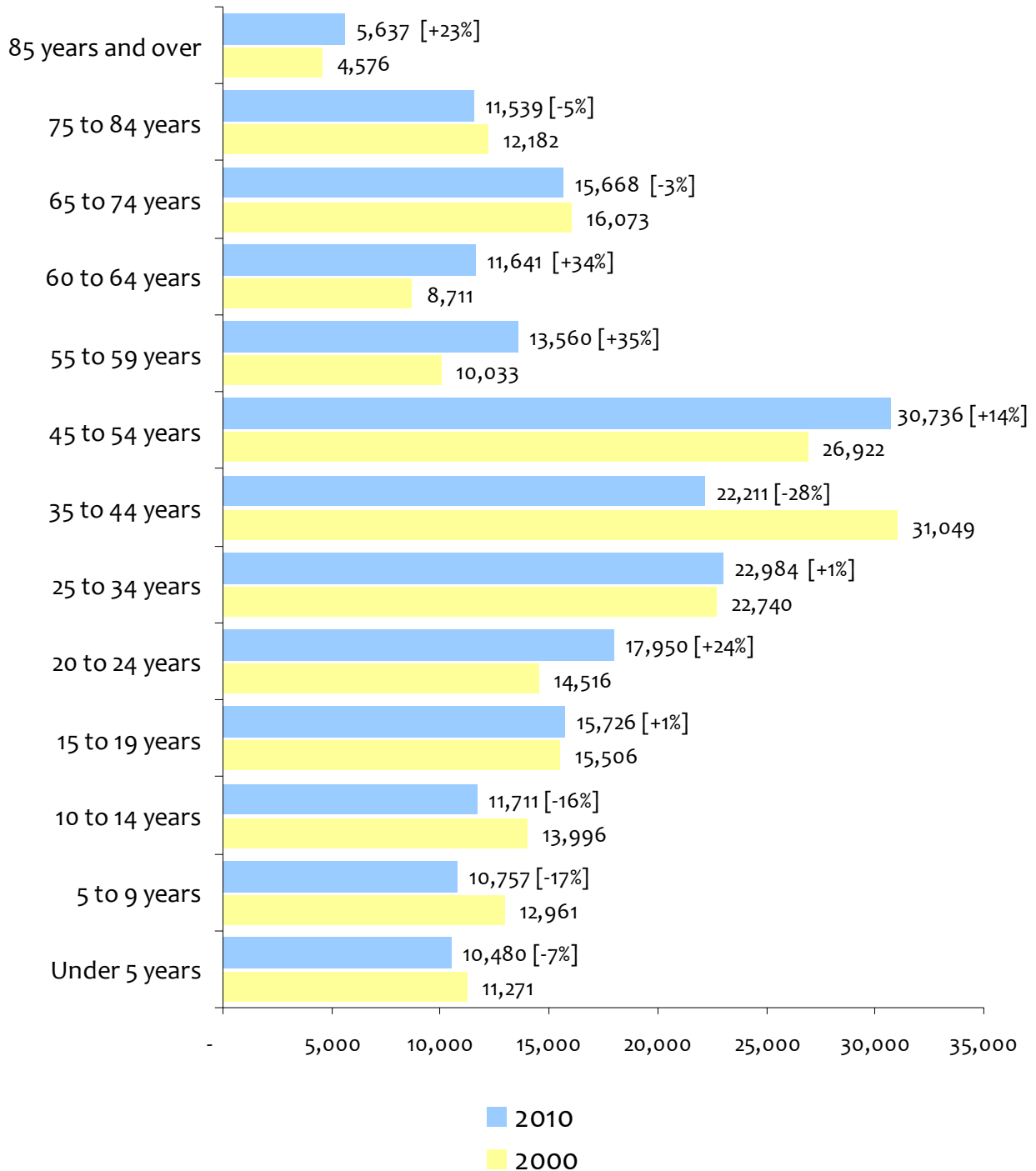
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Median Age in 2000 and 2010: Broome County Municipalities				
Area	2000	2010	Change	
			No. of Years	Percent
Broome County	38.2	40.2	2.0	5.2%
Binghamton-C	36.7	35.8	-0.9	-2.5%
Barker-T	37.5	42.4	4.9	13.1%
Binghamton-T	39.7	44.1	4.4	11.1%
Chenango-T	40.4	44.9	4.5	11.1%
Colesville-T	37.1	42.4	5.3	14.3%
Conklin-T	38.4	44.3	5.9	15.4%
Dickinson-T	41.3	43.0	1.7	4.1%
Fenton-T	41.0	45.4	4.4	10.7%
Kirkwood-T	39.2	42.5	3.3	8.4%
Lisle-T	34.7	39.9	5.2	15.0%
Maine-T	38.8	43.3	4.5	11.6%
Nanticoke-T	34.6	39.8	5.2	15.0%
Sanford-T	40.5	45.2	4.7	11.6%
Triangle-T	36.3	40.2	3.9	10.7%
Union-T	39.5	41.8	2.3	5.8%
Vestal-T	34.2	30.7	-3.5	-10.2%
Windsor-T	37.2	42.5	5.3	14.3%
Deposit-V	36.4	39.7	3.3	9.1%
Endicott-V	37.4	38.2	0.8	2.1%
Johnson City-V	39.3	38.4	-0.9	-2.3%
Lisle-V	36.5	32.8	-3.7	-10.1%
Port Dickinson-V	37.7	39.8	2.1	5.6%
Whitney Point-V	37.1	35.7	-1.4	-3.8%
Windsor-V	38.6	39.1	0.5	1.3%

As we look at the population by age, there are some clear patterns. The largest segment of the population in 2010 was those aged 45 to 54 years, and in the previous Census, the largest segment was those aged 35 to 44 years. This population wave will start to reach retirement age in another 5 to 10 years. Following this surge is a smaller boomlet in those aged 20 to 24 years. This segment increased by 24 percent, but was likely aided by growth at Binghamton University. Most succeeding age groups declined. For example, the children under 5 declined by 7 percent from 2000 to 2010.



Broome County Population by Age





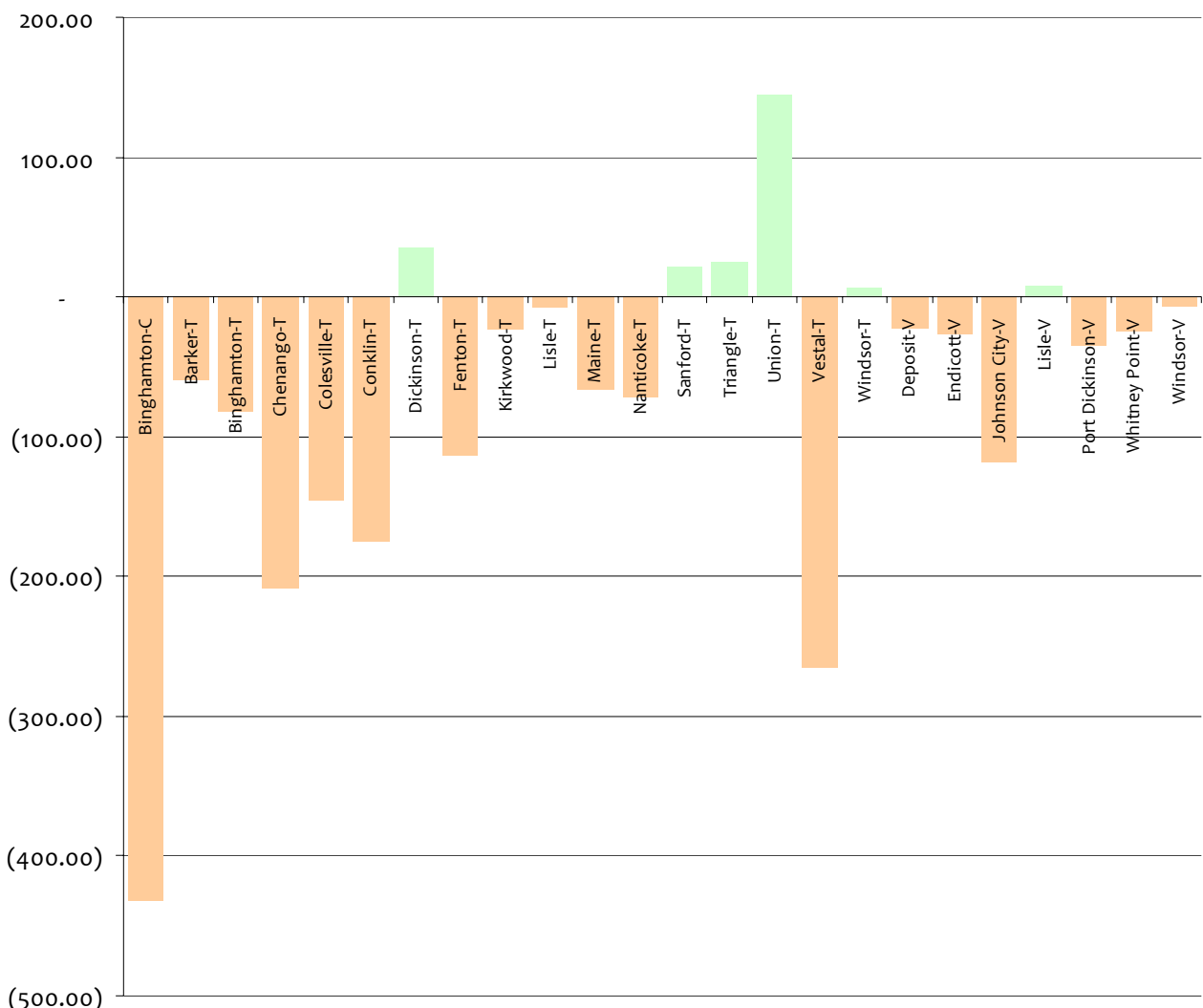
Broome County Comprehensive Plan

Building our Future

One significant number to watch is the growth in residents aged 85 and over. Up 23% from 2000, these residents are the most likely to experience functional decline and need additional services and accessible housing. They also are more likely to have limited retirement assets remaining and as a result live close to or below the poverty line.

A recurring concern from the stakeholder meetings was the flight of young people from this area. We can see this dramatic outmigration in decline in the number of households with individuals under 18. From 2000 to 2010, the number of households in the county with individuals under 18 dropped over 10 percent. Nearly every town and village lost households with young people, and some of the changes were dramatic. The City of Binghamton lost over 430 households with individuals under 18.

**Change in Households with
Individuals Under 18 from 2000 to 2010**





Households Size and Number

The number of households increased across the State and region from 2000 to 2010. Broome County experienced one of the lowest percentage increases in the region. In contrast, Tompkins County experienced the highest percentage increase in the region.

As the number of households increased, the average household sizes decreased across the State and region from 2000 to 2010. Every county in the region experienced a decrease in the average household size greater than the statewide decrease.

Households and Household Size in 2000 and 2010: State, Region and Counties						
Area	Total Households			Average Household Sizes		
	2000	2010	Percent Change 2000-2010	2000	2010	Percent Change 2000-2010
State	7,056,860	7,317,755	3.7%	2.61	2.57	-1.5%
Region	257,584	265,154	2.9%	N/A	N/A	N/A
Broome	80,749	82,167	1.8%	2.37	2.32	-2.1%
Chemung	35,049	35,462	1.2%	2.44	2.37	-2.9%
Chenango	19,926	20,436	2.6%	2.52	2.43	-3.6%
Delaware	19,270	19,898	3.3%	2.39	2.29	-4.2%
Schuyler	7,374	7,530	2.1%	2.52	2.39	-5.2%
Steuben	39,071	40,344	3.3%	2.49	2.41	-3.2%
Tioga	19,725	20,350	3.2%	2.60	2.49	-4.2%
Tompkins	36,420	38,967	7.0%	2.32	2.27	-2.2%

From 2000 to 2010 Broome County experienced an increase of under 2 percent in the number of households. Most of the towns experienced substantial increases in the number of households with the Town of Lisle experiencing the largest increase (almost 10 percent). Several towns experienced a decrease: Conklin, Fenton, Nanticoke and Sanford. Conklin likely experienced the decrease due to the Flood of 2006.

From 2000 to 2010 the City of Binghamton and most of the villages experienced an increase in the number of households similar to or lower than the countywide increase. The Village of Lisle was the one exception, with this municipality experiencing an over 12 percent increase in the number of households and the highest percentage increase countywide. Several villages (Deposit, Johnson City and Whitney Point) experienced substantial decreases in the number of households.



Broome County Comprehensive Plan

Building our Future

Income and Poverty

In 2010 all of the counties in the region had median household incomes substantially lower than the statewide median. Broome County's median household income ranked in the middle for the region, Delaware County had the lowest median household income, and Tioga County had the highest. Per capita income follows an almost identical pattern.

Median Household Income, Per Capita Income and Below Poverty Level in 2000 and 2010: State, Region and Counties			
Area	Median Household Income	Per Capita Income	Population Below Poverty Percent
State	\$55,603	\$30,948	14.2%
Region	N/A	N/A	14.6%
Broome	\$44,457	\$24,314	15.5%
Chemung	\$44,502	\$23,457	15.2%
Chenango	\$43,943	\$22,036	13.6%
Delaware	\$42,967	\$22,928	13.3%
Schuyler	\$47,404	\$22,123	8.3%
Steuben	\$43,867	\$23,279	13.5%
Tioga	\$51,948	\$24,596	9.6%
Tompkins	\$48,655	\$25,737	18.8%

Median Household Income, Per Capita Income and Below Poverty Level in 2000 and 2010: Broome County Municipalities				
Area	Median Household Income	Per Capita Income	Population Below Poverty Level	
			No.	Percent
Broome County	\$44,457	\$24,314	29,548	15.5%
Vestal-T	\$63,433	\$26,452	1,235	6.0%
Chenango-T	\$56,643	\$29,219	703	6.3%
Fenton-T	\$50,491	\$24,705	450	6.9%
Windsor-T	\$47,246	\$21,418	399	7.6%
Triangle-T	\$44,556	\$22,335	162	8.3%
Union-T	\$43,543	\$25,732	2,306	8.4%
Binghamton-T	\$68,029	\$33,696	454	9.2%
Barker-T	\$54,875	\$23,608	294	10.8%
Sanford-T	\$40,163	\$20,007	282	11.6%
Kirkwood-T	\$51,192	\$24,661	678	11.7%
Colesville-T	\$50,893	\$18,938	726	13.9%
Nanticoke-T	\$50,156	\$20,624	230	14.3%
Conklin-T	\$52,546	\$24,848	810	14.7%
Maine-T	\$52,861	\$22,220	883	16.4%
Lisle-T	\$46,793	\$21,595	400	16.8%
Dickinson-T	\$50,107	\$19,829	754	23.0%
Binghamton-C	\$30,702	\$21,455	12,999	27.8%
Deposit-V	\$33,218	\$18,726	442	24.8%
Johnson City-V	\$36,598	\$21,049	3138	20.9%
Endicott-V	\$32,772	\$20,712	2156	16.8%
Windsor-V	\$39,118	\$21,381	165	15.7%
Port Dickinson-V	\$42,438	\$23,320	190	13.4%
Whitney Point-V	\$42,566	\$19,981	112	11.4%
Lisle-V	\$52,750	\$23,420	22	6.8%

In 2010 the region had a slightly lower percentage of people living below the poverty level than the state. Tompkins County ranked the highest at 18.8 percent. Broome County ranked the second highest at 15.5 percent, both higher than the statewide and regional percentage.

Within the county, the Town of Binghamton had the highest median household income at over \$68,000 followed by the Town of Vestal at approximately \$63,500. The City of Binghamton had the lowest median household income at \$30,702. The City of Binghamton had the highest poverty rate at nearly 28 percent followed by the Village of Deposit at nearly 25 percent. Both of these are well above the statewide and regional poverty rates. The towns of Vestal and Chenango had the lowest poverty rates, roughly 1/4 of the City's poverty rate.



Education

It is no surprise that Tompkins County, home to Cornell University and Ithaca College, is the most highly educated county in the region. Almost half of the residents of Tompkins County have a bachelor's degree or higher, nearly double the second most highly educated county in the southern tier: Broome County at just over 25 percent. Broome County is on par with the regional rate, but trails the statewide figure of 32 percent.

There is positive news at the other end of the spectrum: All of the counties had far lower percentages of adults with less than a 9th grade education when compared to the statewide figure. Broome County was in the middle, and Tompkins County had the lowest with fewer than 2 percent.

Educational Attainment for Population Aged 25 and Over in 2010: State, Region and Counties				
Area	Population 25 Years and over	Less than 9 th Grade	High School Graduate (includes equivalency)	Bachelor's Degree Or Higher
State	12,914,436	7.0%	28.2%	32.1%
Region	435,519	3.2%	34.1%	25.4%
Broome	133,739	3.4%	33.2%	25.1%
Chemung	60,491	3.0%	36.6%	20.9%
Chenango	35,113	3.4%	39.6%	17.0%
Delaware	33,831	3.8%	39.1%	19.1%
Schuyler	12,977	3.4%	39.6%	17.4%
Steuben	67,276	4.2%	36.8%	19.9%
Tioga	35,124	2.0%	37.4%	22.7%
Tompkins	56,968	1.9%	20.7%	49.7%

Diversity

It has been widely reported that the United States is becoming an increasingly diverse society. Projections from the Census Bureau show the non-Hispanic white population growing slowly until 2025 and declining thereafter. All other racial groups are expected to grow more rapidly. And the nature of diversity is changing. Between today and 2050, African-American populations will rise by less than one percent of the total population to 13 percent. As a proportion of the total population, Latino populations are expected to almost double in this period from just over 16 percent to almost 28 percent.



Broome County Comprehensive Plan

Building our Future

Within the southern tier region, Tompkins County has the highest minority population, but Broome County is rapidly growing in this area. In 2010, minorities constituted 14 percent of Broome County's population, up over 40 percent for 2000. This is the fastest growth rate in the region, and more than 3 times the statewide change in minority population.

Minority Population in 2000 and 2010: State, Region and Counties					
Area	2000		2010		Change in Minority Population 2000-2010 %
	White Alone, Not Hispanic or Latino %	Minority %	White Alone, Not Hispanic or Latino %	Minority %	
State	62%	38%	58%	42%	12%
Region	92%	8%	89%	11%	34%
Broome	90%	10%	86%	14%	43%
Chemung	90%	10%	87%	13%	25%
Chenango	97%	3%	96%	4%	40%
Delaware	95%	5%	93%	7%	39%
Schuyler	96%	4%	96%	4%	-14%
Steuben	96%	4%	94%	6%	37%
Tioga	97%	3%	96%	4%	26%
Tompkins	84%	16%	80%	20%	29%

Minority populations in Broome County remain dominated by Black/African-American residents, but the gap is very narrow. Just under 5 percent of the county is African-American, ahead of the Asian (3.5 percent) and Hispanic or Latino Population (3.4 percent).

Minority populations are not uniformly distributed throughout the county. The City of Binghamton, the Village of Johnson City and the Town of Vestal have the largest minority populations. In the City of Binghamton, 25 percent of the population is minority, up almost 37 percent from 2000. Johnson City and Vestal each have approximately 19 percent minority residents. The two largest minority populations are the African American community in Binghamton (11.4 percent) and the Asian community of Vestal, at nearly 11 percent of the town's population. The Town of Lisle is the least diverse, with less than 3 percent minority population. Some of the rural towns experienced very large percentage changes in minority populations, but these are on very small bases and do not represent large swings in the actual population.



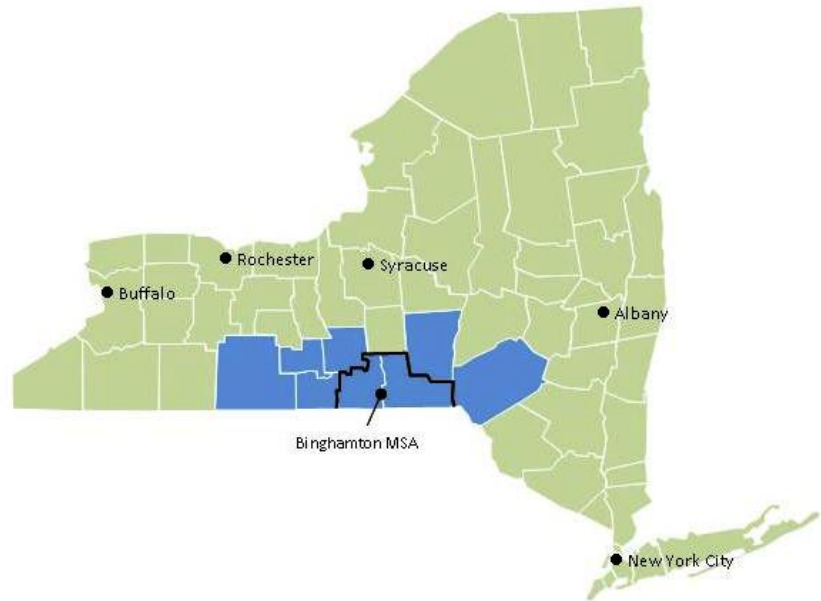
Economic Profile

Introduction

Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis include an economic profile of Broome County, a shovel-ready sites assessment, a profile of the local workforce, a target industry analysis, and an incentive evaluation. This document is the first of five deliverables.

This chapter refers to a number of different geographies for analysis, depending on the availability of data. They are described below:

- **Broome County** – With 200,600 residents in 2010, Broome County is the most populous county in New York's Southern Tier region. It is bordered by Tioga County to the west, Delaware County to the east, and Cortland and Chenango Counties to the north; the Northern Tier of Pennsylvania adjoins Broome County to the south.
- **Binghamton MSA** – The Binghamton Metropolitan Statistical Area (MSA) is comprised of two counties: Broome and Tioga. Excluding the vast New York-Northern New Jersey-Long Island, NY-NJ-PA MSA, it is the seventh largest MSA in New York State with a 2010 population of 251,725. Population centers include the Town of Union (56,346), the City of Binghamton (47,376), and the Town of Vestal (28,043) in Broome County and the Town of Owego (19,883) in Tioga County. Together, these four communities comprise 60% of the population of the Binghamton MSA.





Broome County Comprehensive Plan

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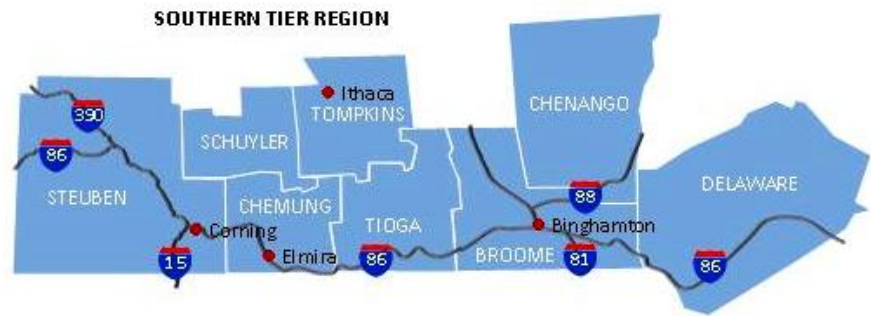
▪ **Southern Tier Region –**

With a 2010 population of 657,909, the Southern Tier region as defined by Empire State

Development

encompasses the counties of Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga

and Tompkins. Major cities in the region, in addition to Binghamton, include Elmira, Corning, and Ithaca.

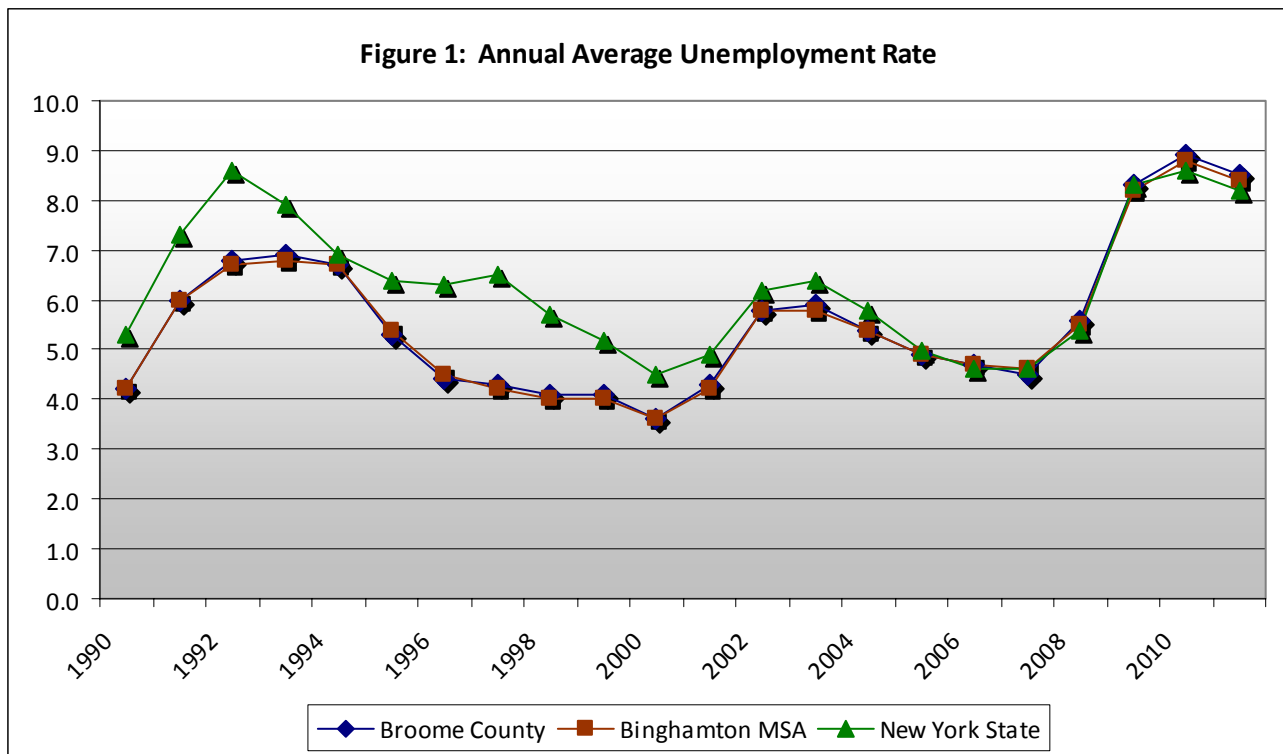


Unless otherwise noted, the analysis draws upon quantitative data from the U.S. Bureau of Labor Statistics and the NYS Department of Labor, including Local Area Unemployment Statistics (LAUS), the Current Employment Survey (CES), and the Quarterly Census of Employment and Wages (QCEW). Annual averages are used to avoid seasonal variations in employment levels during certain times of the year.



Unemployment Trends

As shown in **Figure 1**, unemployment rates in Broome County and the Binghamton MSA over the last two decades have been below the unemployment rate in New York State as a whole. While local unemployment tends to rise and fall with the state, the rate of unemployment in Broome County from 1990 through 2005 ranged from 0.1 to 2.2 percentage points below the state average.



Source: NYS Department of Labor, Local Area Unemployment Statistics, and E.M. Pemrick and Company.
National recessions occurred July 1990-March 1991, April to November 2001, and January 2008-June 2009.

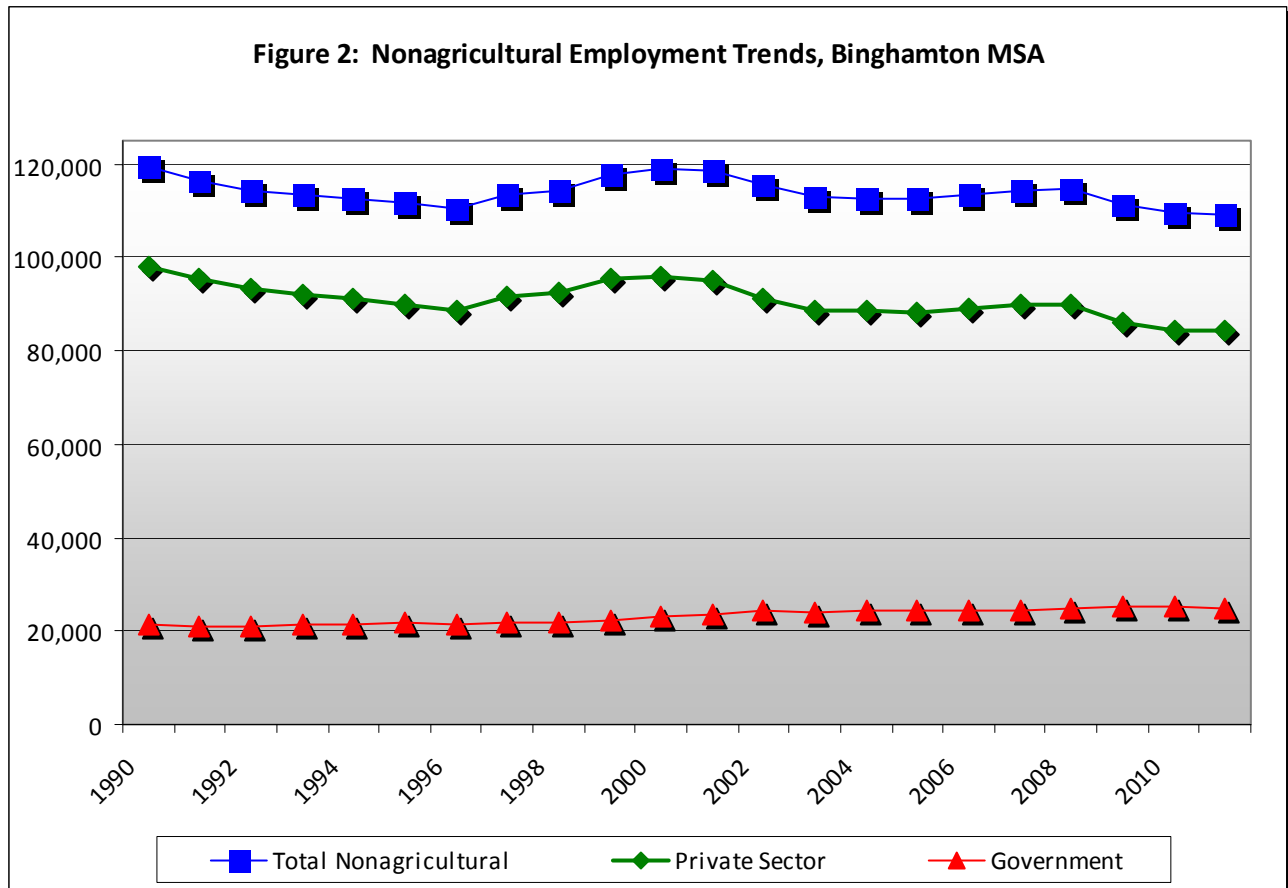
Over the last several years, however, the unemployment rate in Broome County has generally exceeded the state unemployment rate, albeit by less than a percentage point. In 2011, for example, average unemployment for the year was 8.5% in Broome County, compared to 8.2% in New York State.

The latest figures from the NYS Department of Labor show the unemployment rate in the Binghamton metropolitan area climbing to 10.2% in January 2013. Compared to other metro areas in upstate New York, Binghamton performed better than Elmira and Glens Falls (where the unemployment rates were 10.5% and 10.3%, respectively) and tied Utica-Rome.



Employment Trends

Figure 2 below shows nonagricultural employment in the Binghamton MSA. From a long-term perspective, 1990 through 2011, employment in the Binghamton MSA has declined, from a base of 119,300 to 109,200, a net loss of more than 10,000 jobs (-8.5%). Most of the decline took place after 2000, when employment levels reached 119,000.



Source: NYS Department of Labor, Current Employment Statistics, and E.M. Pemrick and Company.

In contrast to the private sector, government jobs increased during this time, from 21,300 in 1990 to a high of 25,300 in 2009, before dropping slightly to 24,900 in 2011.¹ These increases were mainly in the area of education, which had a net employment gain of 3,200.

¹ The distribution of government jobs in 1990 was approximately 5% federal, 31% state, and 64% local; by 2011, it had shifted to 3% federal, 35% state, and 61% local.

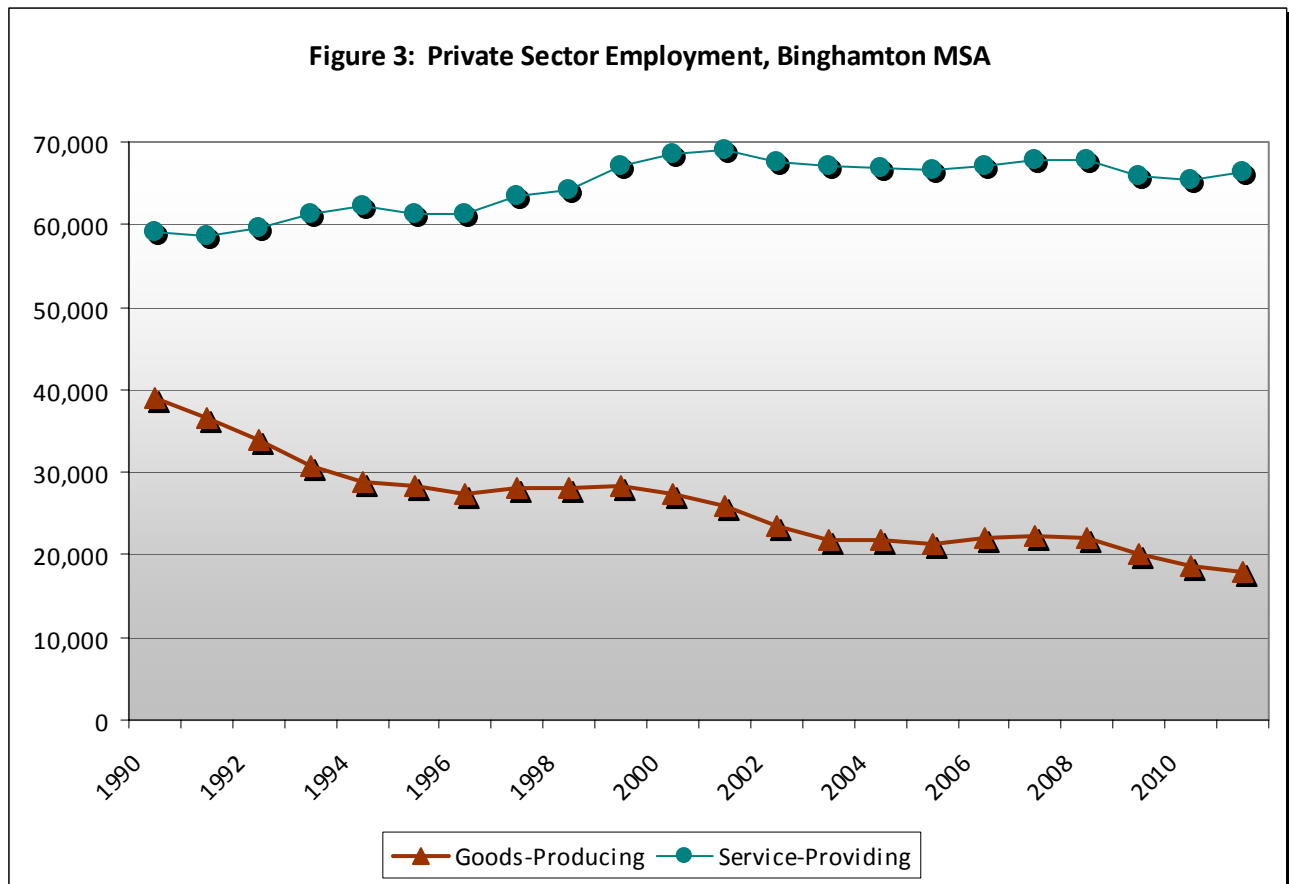


Broome County Comprehensive Plan

Building our Future

The fastest rate of growth in the public sector (33%) was in state government, with most of the increase in educational services – a reflection of growth at Binghamton University. Between 1990 and 2011, the number of state government positions associated with education swelled from 2,800 to 4,700, while the number of other state jobs in the Binghamton MSA increased from 3,600 to 4,100.

Figure 3 depicts the steady decline in the number of goods-producing jobs in the region over the last two decades. In 1990, 32.7% of the private sector employment in the Binghamton MSA was in goods production, the majority of it in manufacturing (other sectors include mining and construction). By the end of the decade, the share had declined to 22.9%, and it was down to 17.1% ten years later. Overall, the MSA shed 21,000 jobs in goods production between 1990 and 2011.



Source: NYS Department of Labor, Current Employment Statistics, and E.M. Pemrick and Company.

In contrast, employment in the service sector increased by 7,300, or 12.4%. However, it was not nearly enough to make up for the losses in higher-paying manufacturing jobs.

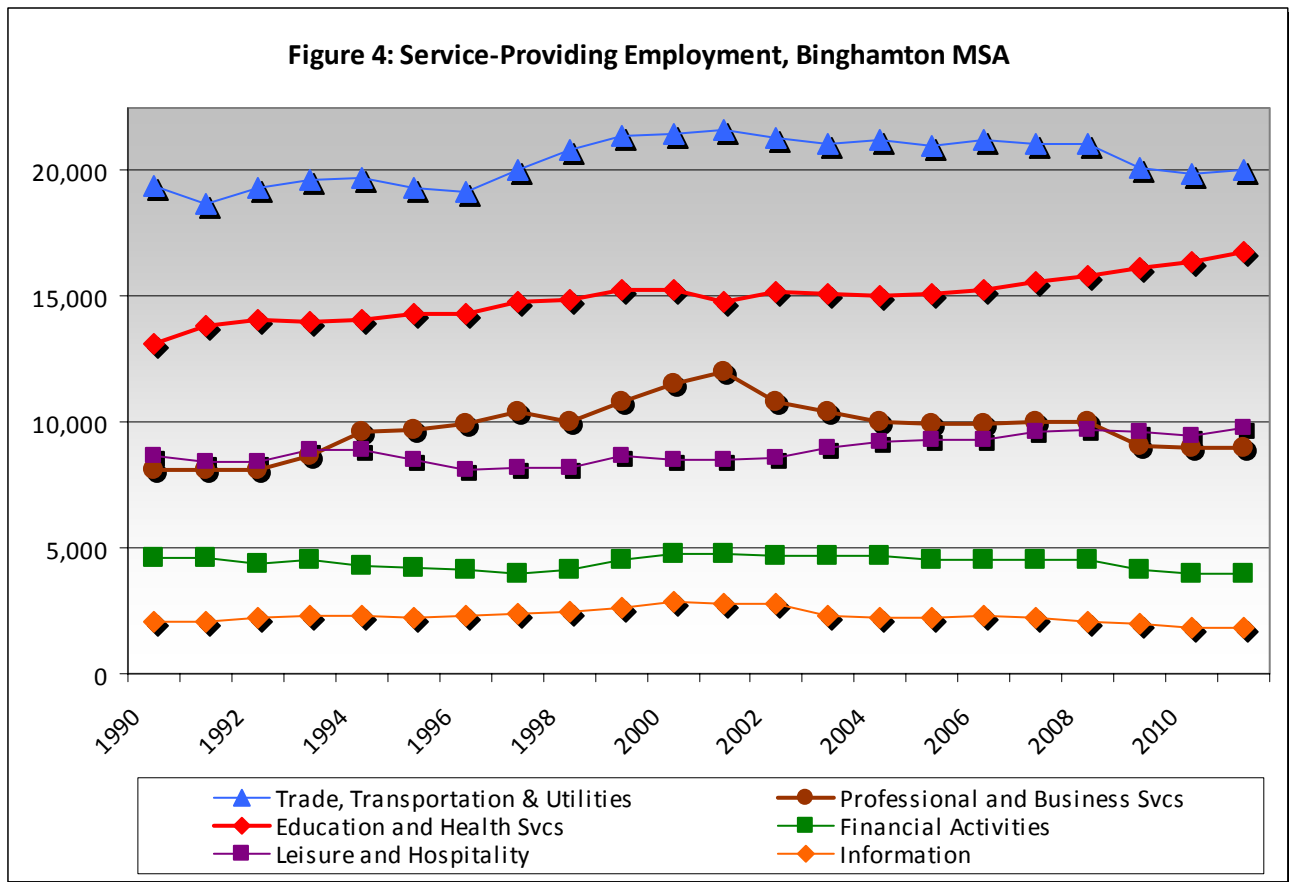


Broome County Comprehensive Plan

Building our Future

Moreover, as shown in **Figure 4**, service sector growth has not been evenly distributed across all industries, nor has it been consistent. Professional and business services, for example, added nearly 4,000 jobs during the 1990s, but the growth was not sustained. By 2011, there were only 900 more professional and business services jobs than there had been twenty years earlier. The number of jobs in both information and financial activities declined over the period. Many service-providing industries grew during the 1990s, only to lose employment in the subsequent decade.

Growth did occur in wholesale trade (+33.3%, or 1,200 jobs) and in leisure and hospitality (+12.6%, or 1,100 jobs). Education and health services - “eds and meds” - led the net gain in Binghamton MSA employment, adding 3,700 jobs between 1990 and 2011, an increase of 28.2%.



Source: NYS Department of Labor, Current Employment Statistics, and E.M. Pemrick and Company.



Broome County Comprehensive Plan

Building our Future

Employment by Industry

Table 1 below presents employment by industry² in Broome County and the Binghamton MSA. In 2011, the most recent year for which annual averages are available, the total number of jobs in the Binghamton MSA was 103,098, of which 87% were in Broome County.

Table 1: Employment by Industry, 2011				
Description	Broome County		Binghamton MSA	
	Number	Percent	Number	Percent
Total, Government	19,905	22.1%	22,540	21.9%
Health Care and Social Assistance	14,389	16.0%	15,475	15.0%
Retail Trade	11,174	12.4%	12,477	12.1%
Manufacturing	9,678	10.8%	13,684	13.3%
Accommodation and Food Services	7,247	8.1%	8,089	7.8%
Administrative and Waste Services	4,102	4.6%	4,459	4.3%
Wholesale Trade	3,746	4.2%	4,286	4.2%
Construction	3,594	4.0%	4,042	3.9%
Professional and Technical Services	3,179	3.5%	3,471	3.4%
Other Services	3,170	3.5%	3,450	3.3%
Finance and Insurance	2,588	2.9%	2,822	2.7%
Information	1,612	1.8%	1,703	1.7%
Transportation and Warehousing	1,464	1.6%	1,843	1.8%
Real Estate and Rental and Leasing	974	1.1%	1,020	1.0%
Arts Entertainment and Recreation	880	1.0%	1,322	1.3%
Management of Companies and Enterprises	710	0.8%	716	0.7%
Educational Services	520	0.6%	584	0.6%
Agriculture, Forestry, Fishing & Hunting	160	0.2%	215	0.2%
Mining	28	0.0%	69	0.1%
Total, All Industries	89,928	100.0%	103,098	100.0%

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company.

After government, the largest industry sector in Broome County was health care and social assistance, with 16% of total employment. Retail was the next largest sector, supplying approximately 12% of total employment in the County, followed by manufacturing, with 11%.

Broome County employment data is also available at the sub-sector or 3-digit NAICS level. This information allows for a better understanding of the key industries in the area. As shown in **Table 2**, the largest private-sector employer in the County was food services and drinking places, followed by hospitals, and computer and electronics manufacturing. In fact, 7% of the state's nearly 62,000

² Based on the NAICS sectors used for classifying private sector activity, plus total government. NAICS 99, Unclassified, is not shown. NAICS 21, Mining and NAICS 22, Utilities are missing from some tables due to confidentiality issues.



Broome County Comprehensive Plan

Building our Future

computer and electronics manufacturing jobs were in Broome County, while 13% were in the Binghamton metro area. Products made locally by this industry include computer and peripheral equipment, semiconductor and electronic components, and electronic instruments.

Another key industry that serves as a source of high-wage employment locally is professional, scientific, and technical services. Nationally, professional services is one of the fastest-growing segments of the economy. In Broome County, the establishments in this sector tend to be small, with an average of 9.7 employees. The largest numbers of jobs were in computer systems design (615), architectural and engineering services (561), legal services (543), and accounting and bookkeeping (341).

Of the industries supplying the most jobs in Broome County, five were in retail, four were in health care, and there were two each in manufacturing and wholesale trade. The remainder were classified in various service categories. Together, these 20 industries comprised approximately 74% of the private-sector employment in Broome County, or 57% of total employment.

Table 2: Largest Industry Employment by 3-Digit NAICS Code, Broome County

NAICS Code	Description	Employment and Wages, 2011		
		Number	Percent	Average Annual Wages
722	Food Services and Drinking Places	6,632	9.5%	\$13,568
622	Hospitals	5,613	8.0%	\$45,560
334	Computer and Electronic Product Mfg	4,532	6.5%	\$75,569
561	Administrative and Support Services	3,828	5.5%	\$24,678
621	Ambulatory Health Care Services	3,687	5.3%	\$57,652
541	Professional and Technical Services	3,179	4.5%	\$47,104
623	Nursing and Residential Care Facilities	2,719	3.9%	\$27,071
445	Food and Beverage Stores	2,545	3.6%	\$18,482
238	Specialty Trade Contractors	2,400	3.4%	\$50,668
624	Social Assistance	2,369	3.4%	\$22,471
452	General Merchandise Stores	2,318	3.3%	\$18,278
424	Merchant Wholesalers Nondurable Goods	2,067	3.0%	\$45,934
813	Membership Organizations and Associations	1,731	2.5%	\$17,783
524	Insurance Carriers and Related Activities	1,562	2.2%	\$58,319
423	Merchant Wholesalers Durable Goods	1,533	2.2%	\$42,425
332	Fabricated Metal Product Manufacturing	1,148	1.6%	\$39,351
441	Motor Vehicle and Parts Dealers	1,072	1.5%	\$34,701
522	Credit Intermediation and Related Activity	865	1.2%	\$41,876
444	Building Material Garden Supply Stores	864	1.2%	\$28,215
448	Clothing and Clothing Accessories Stores	858	1.2%	\$14,207

Source: NYS Department of Labor, Quarterly Employment & Wages, and E.M. Pemrick and Company. Private-sector only. Industries in which annual wages are higher than the average for all industries (\$37,813) are shown in **bold**.



Broome County Comprehensive Plan

Building our Future

Wages by Industry

Public and private employers in Broome County paid a total of \$3.4 billion in wages and salaries in 2011. Looking at how these wages are distributed by industry provides another perspective in determining the relative importance of particular industries to the County economy. As shown in **Table 3**, several industries accounted for a larger share of total wages than total employment; for instance, manufacturing supplied less than 11% of the jobs but paid 17% of the wages.

Table 3: Total Wages and Average Annual Wages by Industry, Broome County, 2011

Description	Wages (000s)	Percent of All Wages	Average Annual Wages
Total, Government	\$793,655	23.3%	\$39,872
Health Care and Social Assistance	\$595,130	17.5%	\$37,813
Manufacturing	\$568,964	16.7%	\$58,789
Retail Trade	\$244,095	7.2%	\$21,845
Construction	\$185,995	5.5%	\$51,751
Wholesale Trade	\$168,670	5.0%	\$45,027
Professional and Technical Services	\$149,743	4.4%	\$47,104
Finance and Insurance	\$142,733	4.2%	\$55,152
Administrative and Waste Services	\$104,875	3.1%	\$25,567
Accommodation and Food Services	\$101,390	3.0%	\$13,991
Information	\$68,382	2.0%	\$42,420
Other Services	\$67,218	2.0%	\$21,205
Transportation and Warehousing	\$50,604	1.5%	\$34,565
Management of Companies and Enterprises	\$38,146	1.1%	\$53,726
Real Estate and Rental and Leasing	\$29,427	0.9%	\$30,213
Arts Entertainment and Recreation	\$14,810	0.4%	\$16,830
Educational Services	\$10,807	0.3%	\$20,784
Agriculture, Forestry, Fishing & Hunting	\$4,040	0.1%	\$25,251
Total, All Industries	\$3,400,451	100.0%	\$37,813

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company.

Average wages for workers employed across *all* industry sectors were \$37,813 in 2011. Several industry sectors had significantly *higher than average* wages in Broome County including manufacturing, finance and insurance, management of companies and enterprises, construction, and wholesale trade. Industry sectors that pay *lower than average* wages (such as retail trade) are often those in which there is a predominance of part-time employment.

Table 4 lists the industries that paid the highest total wages in Broome County. They include many of the largest employers shown in Table 2; however, four of the industries – machinery manufacturing, heavy construction, management of companies and enterprises, and food



Broome County Comprehensive Plan

Building our Future

manufacturing – are *not* among the top 20 employers. These are industries that contribute disproportionately to the County economy because they provide high-paying jobs. Together, the 20 industries listed comprise approximately 76% of the private-sector wages paid or 58% of the total wages paid to workers in Broome County.

Table 4: Highest Total Wages by 3-Digit NAICS Code, Broome County

		Wages (000s)	Percent of All Wages	Average Annual Wages
334	Computer and Electronic Product Mfg	\$342,478	10.1%	\$75,569
622	Hospitals	\$255,730	7.5%	\$45,560
621	Ambulatory Health Care Services	\$212,561	6.3%	\$57,652
541	Professional and Technical Services	\$149,743	4.4%	\$47,104
238	Specialty Trade Contractors	\$121,604	3.6%	\$50,668
424	Merchant Wholesalers Nondurable Goods	\$94,945	2.8%	\$45,934
561	Administrative and Support Services	\$94,469	2.8%	\$24,678
524	Insurance Carriers and Related Activities	\$91,094	2.7%	\$58,319
722	Food Services and Drinking Places	\$89,982	2.6%	\$13,568
623	Nursing and Residential Care Facilities	\$73,606	2.2%	\$27,071
423	Merchant Wholesalers Durable Goods	\$65,037	1.9%	\$42,425
624	Social Assistance	\$53,233	1.6%	\$22,471
445	Food and Beverage Stores	\$47,038	1.4%	\$18,482
333	Machinery Manufacturing	\$45,967	1.4%	\$66,426
332	Fabricated Metal Product Manufacturing	\$45,175	1.3%	\$39,351
237	Heavy and Civil Engineering Construction	\$43,627	1.3%	\$67,326
452	General Merchandise Stores	\$42,368	1.2%	\$18,278
551	Management of Companies and Enterprises	\$38,146	1.1%	\$53,726
311	Food Manufacturing	\$37,419	1.1%	\$44,178
441	Motor Vehicle and Parts Dealers	\$37,199	1.1%	\$34,701

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company. Private-sector only. Annual wages higher than the average for all industries in Broome County (\$37,813) are shown in **bold**.

Wage levels in Broome County lagged those in the Southern Tier region and New York State in nearly all private-industry sectors in 2011 (**Table 5**). The exceptions were in the health care and social services and construction sectors, where average annual wages in Broome County were higher than those in the Southern Tier overall. For all sectors, wages in Broome County were 91.9% of those in the Southern Tier and only 61.2% of those in New York State.

The wage levels in Broome County, it should be noted, can be both a blessing and a curse. While lower wages can be an asset in attracting new businesses because of reduced labor costs, they also put the County at a disadvantage in recruiting workers from other locations where salaries are higher. This poses a dilemma, particularly as the supply of skilled labor becomes a critical issue in many industries.



Broome County Comprehensive Plan

Building our Future

Table 5: Average Annual Wages for Selected Industries

NAICS Code	Description	Broome County	Southern Tier region	New York State	% of region	% of state
	Total, All Industries	\$37,813	\$41,164	\$61,768	91.9%	61.2%
	Total, All Private	\$37,228	\$41,391	\$63,057	89.9%	59.0%
23	Construction	\$51,751	\$47,294	\$61,495	109.4%	84.2%
238	Specialty Trade Contractors	\$50,668	\$46,960	\$59,437	107.9%	85.2%
31-33	Manufacturing	\$58,789	\$58,551	\$60,059	100.4%	97.9%
332	Fabricated Metal Product Manufacturing	\$39,351	\$44,312	\$51,103	88.8%	77.0%
334	Computer and Electronic Product Mfg	\$75,569	\$75,237	\$89,508	100.4%	84.4%
42	Wholesale Trade	\$45,027	\$46,738	\$73,798	96.3%	61.0%
423	Merchant Wholesalers Durable Goods	\$42,425	\$43,977	\$70,611	96.5%	60.1%
424	Merchant Wholesalers Nondurable Goods	\$45,934	\$44,938	\$71,465	102.2%	64.3%
44-45	Retail Trade	\$21,845	\$22,962	\$30,260	95.1%	72.2%
48-49	Transportation and Warehousing	\$34,565	\$37,251	\$44,479	92.8%	77.7%
51	Information	\$42,420	\$44,913	\$95,978	94.4%	44.2%
52	Finance and Insurance	\$55,152	\$56,294	\$201,442	98.0%	27.4%
522	Credit Intermediation and Related Activity	\$41,876	\$46,601	\$121,108	89.9%	34.6%
524	Insurance Carriers Related Activities	\$58,319	\$52,925	\$97,236	110.2%	60.0%
54	Professional and Technical Services	\$47,104	\$64,705	\$94,054	72.8%	50.1%
541	Professional and Technical Services	\$47,104	\$64,705	\$94,054	72.8%	50.1%
56	Administrative and Waste Services	\$25,567	\$33,169	\$41,931	77.1%	61.0%
561	Administrative and Support Services	\$24,678	\$32,826	\$41,317	75.2%	59.7%
61	Educational Services	\$20,784	\$54,703	\$48,733	38.0%	42.6%
62	Health Care and Social Assistance	\$41,360	\$38,064	\$45,282	108.7%	91.3%
621	Ambulatory Health Care Services	\$57,652	\$55,133	\$50,313	104.6%	114.6%
622	Hospitals	\$45,560	\$43,779	\$63,386	104.1%	71.9%
623	Nursing and Residential Care Facilities	\$27,071	\$25,884	\$33,049	104.6%	81.9%
624	Social Assistance	\$22,471	\$22,884	\$26,175	98.2%	85.8%
72	Accommodation and Food Services	\$13,991	\$14,290	\$22,815	97.9%	61.3%
722	Food Services and Drinking Places	\$13,568	\$13,822	\$19,970	98.2%	67.9%

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company. Private-sector only.



Location Quotients

A location quotient (LQ) is a simple tool used to measure industry specialization, using the U.S. (or another reference area) as a benchmark. It identifies how local industries stack up against national averages, revealing potential economic strengths and development prospects.³

An LQ is a ratio that compares an industry's share of total employment in a region to the *national* share. A value of 1.00 demonstrates that the share of employment in a particular industry is roughly the same both locally and nationally. An LQ *greater* than 1.00 indicates that the local area is more specialized in that industry relative to the U.S.; it implies an industry that exports products or services, bringing income into the region. An LQ *less* than 1.00 means that the local area is *less* specialized in that industry; it suggests an industry that is not even fulfilling local needs, so those products and services must be imported. As a rule of thumb, location quotients of between 0.80 and 1.20 are not considered significantly different from 1.00.

Table 6: Location Quotients by Industry

Description	Broome County	Binghamton MSA
Agriculture, Forestry, Fishing & Hunting	0.21	0.25
Mining	0.06	0.13
Construction	1.01	0.99
Manufacturing	1.28	1.57
Wholesale Trade	1.04	1.04
Retail Trade	1.18	1.14
Transportation and Warehousing	0.56	0.61
Information	0.93	0.86
Finance and Insurance	0.73	0.69
Real Estate and Rental and Leasing	0.79	0.72
Professional and Technical Services	0.60	0.60
Management of Companies and Enterprises	0.60	0.50
Administrative and Waste Services	0.80	0.80
Educational Services	0.30	0.30
Health Care and Social Assistance	1.40	1.30
Arts Entertainment and Recreation	0.70	0.90
Accommodation and Food Services	1.00	1.00
Other Services	1.10	1.10

Source: U.S. Bureau of Labor Statistics, QCEW, and E.M. Pemrick and Company.

³ Although location quotients provide a quick and easy way to identify potential opportunities, they do have a number of shortcomings. For example, the LQ method assumes that productivity levels, consumption patterns, etc. are more or less the same everywhere, which may not be the case. An LQ may be high in an industry because of an inefficient work force or lagging technology. Similarly, an LQ greater than 1.20 does not necessarily mean that the industry is exporting; there may simply be high local demand. For this reason, location quotients are best used as a starting point to enhance one's understanding of the local economy.



Broome County Comprehensive Plan

Building our Future

As shown in **Table 6**, only two industry sectors in Broome County have LQs that exceed 1.20: manufacturing (1.28), and health care and social assistance (1.40). Employment is considerably less concentrated in transportation (0.56), professional services (0.60), arts, entertainment, and recreation (0.70), and finance and insurance (0.73). These may represent areas of opportunity for diversifying the local economy, although additional analysis is needed.

The analysis of disaggregated data at the 3-digit NAICS level helps to further identify local industry strengths. **Table 7** lists industries with location quotients of 1.20 or greater. As the table indicates, Broome County has high levels of employment concentration relative to the nation in the production of computers and electronic products, electrical equipment, textile products, and fabricated metal products. Local employment is also more concentrated than the nation with respect to membership organizations, hospitals, wholesale trade in nondurable goods (e.g., grocery products), nursing and residential care facilities, and several retail industries.

Table 7: Industries at the 3-Digit NAICS Level with Location Quotients Above 1.2

NAICS Code	Description	Broome County	Binghamton MSA
334	Computer and Electronic Product Mfg	6.35	9.56
335	Electrical Equipment and Appliances	3.38	2.94
813	Membership Organizations and Associations	2.03	1.90
622	Hospitals	1.86	1.61
314	Textile Product Mills	1.77	1.57
424	Merchant Wholesalers Nondurable Goods	1.65	1.49
515	Broadcasting (except Internet)	1.56	1.36
442	Furniture and Home Furnishings Stores	1.43	1.29
451	Sporting Goods Hobby Book Music Stores	1.40	1.26
445	Food and Beverage Stores	1.39	1.41
447	Gasoline Stations	1.33	1.40
623	Nursing and Residential Care Facilities	1.33	1.34
332	Fabricated Metal Product Manufacturing	1.32	1.22
443	Electronics and Appliance Stores	1.26	1.13
237	Heavy and Civil Engineering Construction	1.21	1.20

Source: U.S. Bureau of Labor Statistics, QCEW, and E.M. Pemrick and Company.

Recent and Projected Industry Trends

Industry Trends, 2005-2011

As described previously, employment levels in the Binghamton MSA have declined precipitously over the last two decades. Broome County alone has had a net reduction of more than 10,000 private sector jobs, 6,800 of them in manufacturing.



Broome County Comprehensive Plan

Building our Future

Table 8: Employment Change by Industry, Broome County

Description	Change, 2005-2011		Change, 2001-2005	
	Number	Percent	Number	Percent
Manufacturing	-2,664	-21.6%	-4,145	-25.1%
Finance and Insurance	-615	-19.2%	-312	-8.9%
Transportation and Warehousing	-551	-27.3%	-437	-17.8%
Information	-465	-22.4%	-513	-19.8%
Professional and Technical Services	-424	-11.8%	-63	-1.7%
Retail Trade	-297	-2.6%	-668	-5.5%
Administrative and Waste Services	-269	-6.2%	-2,036	-31.8%
Accommodation and Food Services	-78	-1.1%	770	11.7%
Educational Services	-33	-6.0%	-95	-14.7%
Arts Entertainment and Recreation	-26	-2.9%	153	20.3%
Wholesale Trade	-12	-0.3%	449	13.6%
Management of Companies and Enterprises	-12	-1.7%	0	0.0%
Agriculture, Forestry, Fishing & Hunting	6	3.9%	4	2.7%
Real Estate and Rental and Leasing	16	1.7%	-14	-1.4%
Construction	143	4.1%	-197	-5.4%
Other Services	258	8.9%	-80	-2.7%
Health Care and Social Assistance	1,339	10.3%	665	5.4%
Total, All Private Sector Industries	-3,935	-5.3%	-6,636	-8.2%

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company. Private sector only.

Between 2005 and 2011, private sector employment in Broome County declined by nearly 4,000 jobs, or about 5.3%. Some of these losses were due to the national recession which started in 2008; others appear to be more long-term in nature. Several industry sectors actually added jobs during this period, principally health care and social services and construction. In fact, if not for the growth in health care, the County's economic situation would have been considerably worse.

New York State also suffered significant employment declines from 2005 to 2011. Although private sector employment statewide grew by a tepid 1.8%, the state lost 21.1% of its manufacturing jobs. Other losses occurred in the state's construction, wholesale trade, finance and insurance, and information sectors.

In comparing recent industry trends in the County with those in the state as a whole, it appears that Broome County performed better than New York State in construction, wholesale trade, and other services, and about the same as the state in manufacturing (jobs lost) and health care (jobs added). The relative stability in the wholesale trade in the County may be due to the fact that many of the jobs are in companies that wholesale food and grocery items, which are more "recession-proof" than companies that distribute other types of products, like machinery and commercial equipment.



Broome County Comprehensive Plan

Building our Future

Employment Projections

Long-term industry employment projections to 2020 are currently available from the NYS Department of Labor for the state and each of its ten labor market regions. These projections serve as a valuable resource in identifying future patterns of employment. It is important to note that the projections are *estimates* of employment levels rather than exact counts; they are obtained through regression analysis using historical data with consideration given to demographic and economic factors that impact labor force participation.

Table 9: Long-Term Industry Employment Projections for Selected Industries, Southern Tier

NAICS Code	Description	Employment		Change, 2010-2020	
		2010	2020	Net	Percent
	Total, All Industries	311,180	330,320	19,140	6.2%
11	Agriculture, Forestry, Fishing and Hunting	2,090	2,050	-40	-1.9%
21	Mining, Quarrying, and Oil and Gas Extraction	940	1,270	330	35.1%
22	Utilities	1,370	1,260	-110	-8.0%
23	Construction	8,450	9,470	1,020	12.1%
238	Specialty Trade Contractors	5,420	6,230	810	14.9%
31-33	Manufacturing	36,100	34,880	-1,220	-3.4%
332	Fabricated Metal Product Manufacturing	2,760	2,880	120	4.3%
334	Computer and Electronic Product Manufacturing	11,360	10,700	-660	-5.8%
42	Wholesale Trade	7,400	8,190	790	10.7%
423	Merchant Wholesalers, Durable Goods	3,320	3,690	370	11.1%
424	Merchant Wholesalers, Nondurable Goods	3,250	3,600	350	10.8%
44-45	Retail Trade	31,040	32,640	1,600	5.2%
48-49	Transportation and Warehousing	4,890	5,780	890	18.2%
51	Information	3,820	3,600	-220	-5.8%
52-53	Financial Activities	10,090	9,870	-220	-2.2%
522	Credit Intermediation and Related Activities	3,980	3,630	-350	-8.8%
524	Insurance Carriers and Related Activities	3,200	3,180	-20	-0.6%
54-56	Professional and Business Services	21,320	24,530	3,210	15.1%
541	Professional, Scientific & Technical Services	9,840	11,230	1,390	14.1%
561	Administrative and Support Services	8,640	10,070	1,430	16.6%
61	Educational Services	60,150	62,910	2,760	4.6%
62	Health Care and Social Assistance	39,400	44,850	5,450	13.8%
621	Ambulatory Health Care Services	8,830	11,160	2,330	26.4%
622	Hospitals	12,190	13,090	900	7.4%
623	Nursing and Residential Care Facilities	9,320	10,450	1,130	12.1%
624	Social Assistance	9,060	10,150	1,090	12.0%
71	Arts, Entertainment, and Recreation	2,660	3,390	730	27.4%
72	Accommodation and Food Services	19,750	21,570	1,820	9.2%
722	Food Services and Drinking Places	17,570	19,210	1,640	9.3%
81	Other Services	12,010	13,480	1,470	12.2%

Source: New York State Department of Labor, Division of Research and Statistics. Employment projections for Government and Self-Employed and Family Workers are not shown.



Broome County Comprehensive Plan

Building our Future

Broome County is included in the projections for the Southern Tier (**Table 9**). According to the NYS Department of Labor:

- Between 2010 and 2020, total employment in the Southern Tier region is projected to increase by 19,140 or 6.2%.
- The greatest job losses in the Southern Tier will continue to occur in the manufacturing sector where employment is projected to decline by a net 1,220 jobs or 3.4% during the decade. However, growth is currently projected for several manufacturing industries including the production of food, machinery, and fabricated metals.
- Among the industry sectors in which employment is projected to increase the most in the Southern Tier are health care and social assistance (a net increase of 5,450), professional and business services (3,210), educational services (2,760), and accommodation and food services (1,820). Together, these sectors will supply nearly 70% of the net new jobs.

Major Employers

According to the NYS Department of Labor, approximately 95% of the private establishments in Broome County have less than 50 employees and 71% have fewer than 10. The average business has 16.4 employees, although the mean number of employees is much higher (57.6) in the manufacturing sector.

The largest employers in Broome County are presented in **Table 10**. The list includes local and state government, educational institutions, hospitals and other service providers, manufacturing and distribution companies, wholesalers, retailers, banks, and insurance businesses.

Table 10: Major Employers in Broome County

Company	Local Employment	Sector	NAICS
Binghamton University	5,493	Government / Educational Services	-
United Health Services	5,428	Health Care	621/622
Lockheed Martin*	2,700	Manufacturing	334
Broome County Government	2,500	Local Government	-
Lourdes Hospital	2,311	Health Care	622
New York State Government	2,034	State Government	-
Broome Developmental Center	1,400	Social Assistance	624
BAE Systems	1,300	Manufacturing	334
Endicott Interconnect Technologies	1,100	Manufacturing	334
Maines Paper and Food Service	1,100	Wholesale Trade	424
Broome-Tioga BOCES	1,049	Local Government	-
NBT Bank	1,039	Financial Services	522
IBM	1,000	Manufacturing	334



Broome County Comprehensive Plan

Building our Future

Table 10: Major Employers in Broome County

Company	Local Employment	Sector	NAICS
Weis Markets	1,000	Retail Trade	445
Sanmina*	1,000	Manufacturing	334
NYSEG	800	Utilities	221
Wegmans	774	Retail Trade	445
Universal Instruments	700	Manufacturing	333
United Methodist Homes	621	Health Care	623
Frito-Lay	540	Manufacturing	311
Nationwide Credit Inc.	500	Financial Services	522
TimeWarner	500	Information	517
Broome Community College	454	Government / Educational Services	-
Country Valley Industries, Inc.	383	Social Assistance	624
MATCO Electric Corporation	350	Construction	238
Willow Run Foods	350	Wholesale Trade	424
National Pipe & Plastics, Inc.	350	Manufacturing	326
Security Mutual Life Insurance	330	Financial Services	524
Modern Marketing Concepts, Inc.	300	Professional and Technical Services	5416
Endicott Precision	130	Manufacturing	332
Innovation Associates	130	Professional and Technical Services	5413
Johnson Outdoors	130	Manufacturing	339
L-3 Communications (Link Simulation and Training)	115	Manufacturing	333
Endicott Research Group, Inc.	100	Manufacturing	334

Source: Broome County IDA and Greater Binghamton Business Journal, with additions by E.M. Pemrick and Company and Moran, Stahl & Boyer based on company interviews and online research.

* - Physically located in Tioga County (part of the Binghamton MSA), but employs many Broome County residents.

Several major employers in Broome County are engaged in patenting activity. Based on data from the U.S. Patent and Trademark Office, Patent Technology Monitoring Team (PTMT), nearly 700 patents were issued to inventors in the Binghamton MSA between 2006 and 2010; approximately 78% of them were from Broome County.⁴ The patents cover a broad range of technology classes, but organizations associated with the most patents in the area during the five-year period included IBM (278), Lockheed Martin (197), and Endicott Interconnect Technologies (87).

Information on recent projects undertaken by some of the County's leading employers is provided below.

Binghamton University

The largest employer in Broome County, Binghamton University (BU) has an economic impact that extends well beyond full- and part-time jobs directly associated with the school. Recent data published by the university estimates that in fiscal year 2011 alone:

⁴ The geographic distribution of the patents is based on the residence of the inventor whose name appears first on the printed patent (i.e., the first-named inventor).



Broome County Comprehensive Plan

Building our Future

- BU's nearly 15,000 students contributed about \$96 million to the local economy.
- More than 225,000 visitors came to campus, spending about \$7 million in the community.
- University-related spending supported 10,500 jobs in Broome and Tioga counties, generating an economic impact of \$965 million. This is an increase from 8,900 jobs and a \$750 million impact in fiscal year 2008.⁵

According to BU administration, student enrollment has increased by 4,000 over the last decade, and a strategic plan has been established to grow the enrollment to 17,000 by 2016. Often cited as a “second choice” for high school graduates applying to Ivy League schools, BU received a record number of applications for undergraduate admissions last fall – about 29,000 applications for 3,000 slots.

During his State of the University Address in January, President Harvey Stenger said that BU plans to “get bigger” by adding 400 undergraduate students, at least 100 graduate students, 33 tenure-track faculty members and 35 staff members in 2013.⁶ The university is studying the feasibility of creating a pharmacy school on campus that would offer doctoral degrees. The pharmacy school would complement BU programs in the life sciences, biomedical engineering, nursing, and chemistry, among others, while supporting the region's health care sector.

BU's power as an engine for economic growth in the region is fueled not only by the attraction of students, faculty, and staff, but also by extensive research activities and partnerships with local businesses. BU operates the **Center for Advanced Microelectronic Manufacturing (CAMM)** at the Huron Campus in Endicott, and works closely with industry partners such as Endicott Interconnect, Lockheed Martin, and BAE Systems to help them compete in the global marketplace.

Construction is currently underway on the **NYS Center of Excellence in Small Scale Systems Integration and Packaging (S3IP)** at BU. Expected to open in 2014, the \$30 million, 114,000 square-foot building will provide space for expansion and consolidation of S3IP and its team of scientists and engineers. The facility will undertake research and commercialization efforts in energy-efficient electronic systems, systems integration and packaging, flexible electronics, autonomous solar power, advanced materials and sensors, and health care and life sciences.

BU's NYSUNY 2020 Challenge Grant was approved in 2012. The grant will enable the development of a \$70 million **Smart Energy Center**, scheduled for completion in 2016, that will help revitalize the

⁵ David Robinson, “Binghamton University's economic impact: \$965 million,” *Press Connects*, October 28, 2012. <http://www.pressconnects.com/article/20121028/NEWS01/310280014/Binghamton-University-s-economic-impact-965-million?odyssey=tab|topnews|text|News>

⁶ Eric Coker, “Stenger, VPs outline goals for 2013,” *Inside Binghamton University*, January 22, 2013. <http://www.binghamton.edu/inside/index.php/inside/story/stenger-vps-outline-goals-for-2013>



Broome County Comprehensive Plan

Building our Future

Southern Tier economy and create more than 840 university and private sector jobs. Under the plan, Binghamton University will hire new researchers and faculty, expand its academic offerings and facilities, foster public/private research partnerships, and expand technology development in high-tech fields. In addition to creating the Smart Energy Center, new tuition revenue will allow BU to increase student enrollment and hire 150 new faculty members.

Also in 2012, the **Southern Tier High Technology Incubator** – a collaboration between BU and the regional economic development community – received \$7 million in state funding through the Southern Tier REDC to construct a high-technology incubator in downtown Binghamton. The incubator is expected to help make the vital link between research at local academic institutions and the resources needed to develop new companies and long-term careers in the region. The Broome County IDA has pledged an additional \$2 million to support the project. The County has also applied for \$4 million in grant funding from the U.S. Economic Development Administration.

The incubator facility will be located on a 2.1-acre site near the intersection of Carroll Street and Lisle Avenue. Most of the property is owned by the Broome County IDA. Initially, the incubator will be 22,000 square feet, with room to expand upwards as funding allows; it will include specialized laboratories, such as wet labs, a battery and supercapacitor enablement lab, a solar cell fabrication lab and, potentially, a hospital smart room demonstration facility.

The incubator will be a partnership between BU, Broome County, the Broome County IDA, Broome Community College, and other private and public stakeholders. Incubator tenants are expected to focus on smart energy, healthcare and electronic systems integration and packaging.

United Health Services (UHS)

UHS is a comprehensive regional health care system that operates two hospitals in Broome County: Binghamton General Hospital, a full-service hospital founded in 1888, and Wilson Medical Center, a teaching hospital that provides a range of medical and surgical services, in Johnson City. UHS also has primary care centers, walk-in clinics, and medical offices throughout the Southern Tier; serves as a leading provider of home care services; and offers nursing care, assisted living, and private apartments at its Ideal Senior Living Center in Endicott.

In 2011, UHS completed an expansion of its Cardiac Rehabilitation Program at Binghamton General Hospital, and initiated a fundraising campaign for a \$5 million expansion of the ICU at Wilson Medical Center in Johnson City. The latter is the first major upgrade to the unit since the mid-1970s. In addition, construction was completed on a \$29 million project to build a new state-of-the-art primary care center in Vestal, across from Binghamton University.

Lockheed Martin



Broome County Comprehensive Plan

Building our Future

Despite the cancellation of major military programs that resulted in workforce reductions at Lockheed Martin's Owego facility between 2009 and 2012, the company has won several new contracts, positioning itself for growth over the next five to ten years.

In November 2012, for example, Lockheed Martin won a \$30 million contract from the U.S. Naval Air Systems command to integrate new avionics and software on multiple C-130T aircraft. The project is part of the C-130T's avionics upgrade program.

The following month, the U.S. Navy announced that the Danish government had signed an agreement formalizing its intent to buy nine MH-60R Seahawk helicopters and comprehensive logistics support for its Maritime Helicopter Replacement Program. Valued at \$686 million, the aircraft will be procured through the U.S. government's Foreign Military Sales program.

Under the terms of the agreement, Lockheed Martin's Owego plant will supply avionics and logistics support for the helicopters to be produced by Sikorsky Aircraft of Connecticut. Other major members of the team include General Electric and Raytheon corporations.

Broome County Community College

Located on a 223-acre campus on the outskirts of the City of Binghamton, Broome Community College (BCC) broke ground on a \$21 million, state-of-the-art Natural Science Center in spring 2012. The facility is scheduled to open in time for the 2014-15 academic year. Also under development is a new, 320-bed student housing complex that will allow BCC to accommodate more students from outside the County.

BCC is currently working to acquire the old Binghamton Public Library downtown and converting the structure to a downtown campus that would be used primarily for its growing popular hospitality program. Among the options under consideration are the addition of a gaming program (Tioga Downs, in neighboring Tioga County, is pursuing a casino license) and a culinary school to train students for employment at area restaurants.

Lourdes Hospital

Lourdes Hospital is a Catholic hospital founded in Binghamton in 1925. Since 1999, Lourdes has been a member of Ascension Health, a Catholic health network with more than 100,000 employees in 20 states.

The main campus of Lourdes Hospital in Binghamton recently completed a three-year, \$70 million expansion project. Hospital services include a hospice program, an ambulatory surgery center, and a regional cancer center. Lourdes has established a network of 15 primary care centers throughout the region, and offers a variety of other health services off-site.



Broome County Comprehensive Plan

Building our Future

BAE Systems

BAE Systems in Broome County makes flight and engine controls for defense and commercial applications in addition to heavy-duty hybrid electric motors. After sustaining \$135 million in damages to its facility in Johnson City due to Tropical Storm Lee in 2011, BAE relocated its operations to the Huron Campus in Endicott. It occupies two buildings, one of them a brand-new production facility.

Endicott Interconnect (EI)

A world-class supplier of advanced electronic packaging solutions. Endicott Interconnection (EI) underwent a reorganization in late 2010 and early 2011. At that time, the company shed about 250 jobs as a result of delays in government contracts and suppliers having a difficult time getting products that were needed for manufacturing. Some non-government contracts were also delayed. Despite these actions, the company had a strong year in 2011, with promising products like tamper-proof packaging and package shrink capabilities driving its business.

EI has established strong relationships with both Broome Community College and Binghamton University. In 2011, EI launched the Binghamton Center for Emerging Technologies (BCET). This joint initiative with BU and local commercial, academic, and government agency members aims to accelerate the commercialization of new and improved electronics systems and to attract funding and contracts to the region. EI also continues to collaborate with BU on microelectronics manufacturing, research, and design. In 2012, EI and BU received \$616,470 in state funding through the Southern Tier REDC to purchase additional roll-to-roll processing equipment for the Center for Advanced Microelectronic Manufacturing. According to the funding application, EI will invest \$4.1 million and create 20 new jobs as part of this project.

Maines Paper & Food Service

Headquartered in Conklin, Maines Paper & Food Service is a third-generation company that has continued to grow and further solidify its standing as one of the leading independent food service distributors in the country. In 2010, Maines acquired the primary assets of Acme Pre-Pak Corp., which supplied produce, dairy and grocery products. The following year, Maines acquired David Puccia & Company, a fresh fruits and vegetable distributor from Watertown.

Maine also operates an award-winning distribution center for Darden Restaurants, a national leader in the full service restaurant industry. The Darden family of restaurants includes Red Lobster, Olive Garden, and Longhorn Steakhouse, among others. Based at the Broome Corporate Park, Darden Direct Distribution completed an expansion in 2011 that added 24,000 square foot to the facility.

Willow Run Foods



Broome County Comprehensive Plan

Building our Future

Willow Run Foods is a premier fast food system distributor serving customers in 14 states, providing one-stop shopping for chain restaurant operators. The company is located in a state-of-the-art facility in Kirkwood.

According to a July 2012 news article, Willow Run Foods secured a \$1.3 billion contract with Wendy's restaurants. The five-year contract includes service to nearly 500 Wendy's restaurants throughout the northeastern U.S. Willow Run will provide the restaurant's food, as well as its paper and cleaning products. The company is expected to hire up to 75 employees, including truck drivers, warehouse workers and office personnel.

Willow Run Foods also received a \$1 million funding award through the NYS Energy Research and Development Authority (NYSERDA) to offset the incremental purchase cost of 20 Compressed Natural Gas (CNG) tractor trucks. The CNG vehicles will travel throughout the metro New York area. Upgrades to the facility are also necessary to house these vehicles.

National Pipe & Plastics, Inc.

Relocation and expansion plans are underway for the PVC pipe extruder National Pipe & Plastics, Inc. The company is moving its business from Vestal to Endicott. The new building will give the company the opportunity to update its equipment and improve productivity and efficiency. The project began in 2002, and since then, the company has worked to prepare the site and install equipment in the 235,000-square foot plant, formerly owned by Endicott Johnson. National Pipe & Plastics Inc. will move all 16 extrusion lines from Vestal, and is expected to add 45 employees over three years.

Innovation Associates

After years of experience helping the U.S. Air Force fill prescription medications with automated systems, Innovation, a Johnson City company that builds machines that help pharmacies fill prescription orders, won a contract from the U.S. Navy worth up to \$49 million. The Navy plans to install Innovation's work-flow software, Symphony Systems, which incorporates quality control and guides pharmacists through filling orders accurately.

L-3 Communications

The Link division of L-3 recently recommitted to its location by extending its lease with the Broome County IDA in the Kirkwood Industrial Park. L-3 Communications, Link Simulation & Training, is a global design and engineering company providing full flight simulation and training support services. Its Kirkwood facility is home to simulation programs supporting some of the nation's leading military aircraft.



Broome County Comprehensive Plan

Building our Future

Significant Industries

A recent report by the NYS Department of Labor examines the 16 industry clusters identified by the Empire State Development Corporation for each of the state's 10 labor market regions as well as the state overall.⁷ Industry clusters are important because they are export-oriented, selling products and services to customers outside local markets. They also tend to pay above-average wages.

According to the report, cluster industry employment in the Southern Tier region totaled more than 78,000 in 2011, generating \$4.2 billion in wages. Annual cluster wages averaged \$53,200. With 178 establishments providing 12,600 jobs, industrial machinery and services had the most employment of any industry cluster in the Southern Tier in 2011. Jobs in this cluster are in the production of electrical equipment, fabricated metal, instruments, and machinery. Industrial machinery and services ranked highest in the region in terms of total wages as well, with \$838.9 million. Other high-ranking industry clusters in the Southern Tier included travel and tourism, front office and producer services, and electronics and imaging.

The NYS Department of Labor has identified 11 “significant industries” in the Southern Tier region based on various criteria (see **Table 11**).⁸ Eight of the eleven employed at least 4,000 people in the region in 2011. According to the NYS DOL, these industries share one or more of the following characteristics:

- Above-average job growth, on an absolute or percentage basis, between 2006 and 2009;
- Higher-than-average wages; or
- Strong expected growth through 2016.

Table 11: Significant Industries in the Southern Tier Region

NAICS Code	Industry Name	Job Count (Private Sector Only), 2011		
		Southern Tier Region	Broome County	Broome County As % of Region
238	Specialty Trade Contractors	5,404	2,400	44.4%
327	Nonmetallic Mineral Product Manufacturing	2,250	142	6.3%
334	Computer and Electronic Product Manufacturing	10,606	4,532	42.7%
336	Transportation Equipment Manufacturing	4,492	15	0.3%
523	Securities and Commodity Contracts	561	155	27.6%
541	Professional, Scientific, and Technical Services	9,728	3,179	32.7%
551	Management of Companies and Enterprises	2,173	710	32.7%
611	Educational Services	17,249	520	3.0%
621	Ambulatory Health Care Services	8,866	3,687	41.6%
622	Hospitals	11,717	5,613	47.9%
623	Nursing and Residential Care Facilities	9,167	2,719	29.7%
TOTAL, All Private		209,742	70,023	33.4%

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company.

⁷ NYS Department of Labor, Division of Research and Statistics. *Industry Clusters in New York's Economy: A Statewide and Regional Analysis*. October 2012. www.labor.ny.gov/stats/PDFs/Industry-Clusters-report-2011.pdf

⁸ NYS Department of Labor, Division of Research and Statistics. *Significant Industries: A Report to the Workforce Development System, Southern Tier 2011*. www.labor.ny.gov/stats/PDFs/Significant-Industries-Southern-Tier.pdf



Broome County Comprehensive Plan

Building our Future

Not all of these industries has a major presence in Broome County. To identify significant industries in Broome County, similar criteria were applied using county-level employment data at the 3-digit NAICS level; retail industries were excluded from the analysis. The 21 industries listed in **Table 12** below employed at least 500 people in 2011, and shared one or more of the following characteristics:

- Above-average job growth, on an absolute or percentage basis, between 2005 and 2011;
- Higher-than-average wages; or
- Strong expected growth through 2020.

Table 12: Significant Industries in Broome County

NAICS Code	Description	Employment Change, 2005-11		Avg. Annual Wage	Proj. % Change, 2010-2020	Why Industry is Significant
		Net	Pct			
237	Heavy and Civil Engineering Construction	71	12.3%	\$67,326	0.8%	G, W
238	Specialty Trade Contractors	173	7.8%	\$50,668	14.9%	G, W, P
311	Food Manufacturing	-282	-25.0%	\$44,178	38.8%	W, P
332	Fabricated Metal Product Manufacturing	8	0.7%	\$39,351	4.3%	W
333	Machinery Manufacturing	-226	-24.6%	\$66,426	9.5%	W, P
334	Computer and Electronic Product Mfg	-952	-17.4%	\$75,569	-5.8%	W
424	Merchant Wholesalers Nondurable Goods	92	4.7%	\$45,934	10.8%	W, P
484	Truck Transportation	47	8.6%	\$45,295	9.1%	G, W, P
517	Telecommunications	-132	-18.1%	\$57,929	-12.8%	W
522	Credit Intermediation and Related Activity	-111	-11.4%	\$41,876	-8.8%	W
524	Insurance Carriers and Related Activities	-479	-23.5%	\$58,319	-0.6%	W
531	Real Estate	175	38.7%	\$29,071	8.7%	G, P
541	Professional and Technical Services	-424	-11.8%	\$47,104	14.1%	P, W
551	Management of Companies and Enterprises	-12	-1.7%	\$53,726	10.4%	P, W
621	Ambulatory Health Care Services	127	3.6%	\$57,652	26.4%	G, P, W
622	Hospitals	1,068	23.5%	\$45,560	7.4%	G, P, W
623	Nursing and Residential Care Facilities	110	4.2%	\$27,071	12.1%	G, P
624	Social Assistance	33	1.4%	\$22,471	12.0%	G, P
713	Amusement Gambling Recreation Industries	8	1.6%	\$14,017	31.9%	G, P
722	Food Services and Drinking Places	74	1.1%	\$13,568	9.3%	G, P
813	Membership Organizations and Associations	297	20.7%	\$17,783	12.0%	G, P
TOTAL, All Private		-3,935	-5.3%	\$37,228	6.9%	-

Source: NYS Department of Labor, Quarterly Census of Employment & Wages, and E.M. Pemrick and Company.
 Retail trade excluded. All industries had 500 or more jobs in Broome County in 2011, and one or more of the following:
 G: Industry experienced above-average job growth; can be net or percentage growth.
 P: Above-average growth projected in the Southern Tier for 2010-2020.
 W: Industry pays above-average wages.



Broome County Comprehensive Plan

Building our Future

Of interest is the fact that all four industries included in the health services and social assistance sector are on the list of significant industries. Health care has become a pillar of the Broome County economy, but it is unclear whether the dramatic growth in health care jobs will be sustainable. Cuts in Medicaid and Medicare reimbursements, increasing costs, and the implementation of the federal Affordable Care Act or ACA (popularly known as “Obamacare”) are changing the economics of medicine. Hospitals, physicians’ offices, nursing homes, – all will be required to adapt and become more efficient.

Also on the list of significant industries in Broome County are several manufacturing segments. Despite the long-term decline in the number of manufacturing jobs in the County, the jobs that still exist in this sector tend to be high wage and high value. Manufacturing jobs today also demand a significantly higher level of skill than decades ago, when high school graduates could walk into an Endicott-Johnson factory and get a job for life.

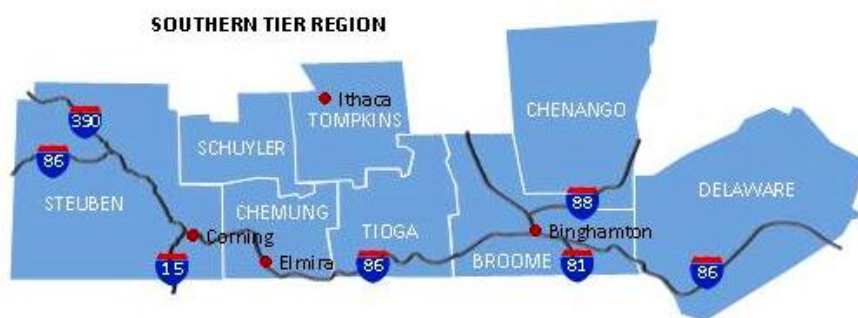
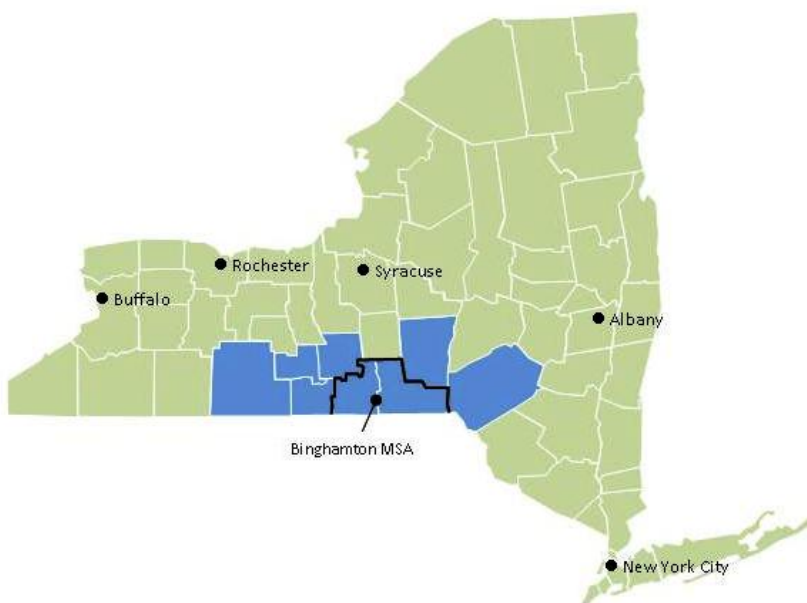


Introduction

Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis include an economic profile of Broome County, a shovel-ready sites assessment, a profile of the local workforce, a target industry analysis, and an incentive evaluation. This document is the second of five deliverables.

This chapter refers to a number of different geographies for analysis, depending on the availability of data. They are described below:

- Broome County** – With 200,600 residents in 2010, Broome County is the most populous county in New York's Southern Tier region. It is bordered by Tioga County to the west, Delaware County to the east, and Cortland and Chenango Counties to the north; the Northern Tier of Pennsylvania adjoins Broome County to the south.
- Southern Tier Region** – With a 2010 population of 657,909, the Southern Tier region as defined by Empire State Development encompasses the counties of Broome, Chemung, Chenango, Delaware, Schuyler, Steuben, Tioga and Tompkins. Major cities in the region, in addition to Binghamton, include Elmira, Corning, and Ithaca.



Unless otherwise noted, the analysis draws upon quantitative data from the U.S. Bureau of Labor Statistics, the U.S. Census Bureau, and the NYS Department of Labor, including Occupational Employment Statistics and Local Employment Dynamics.



Population Change

Data from the U.S. Census Bureau indicate that the Broome County population grew relatively slowly during the last half of the twentieth century. Between 1950 and 2000, the County added approximately 16,000 residents, an increase of 8.6%. This was less than half the rate of population growth in the Southern Tier region (19.5%) and considerably less than the statewide growth rate (28.0%).

The decennial census shows that Broome County had 200,600 residents in 2010, with little change from 2000. The Southern Tier experienced stagnant or declining population levels, while the number of people in New York State overall increased by 2.1%.

Table 1: Population Change

	2000	2010	% Change, 2000-2010	2020 (projected)	% Change, 2010-2020 (projected)
Broome County	200,536	200,600	0.03%	199,743	-0.4%
Chenango County	51,401	50,477	-1.8%	48,154	-4.6%
Cortland County	48,599	49,336	1.5%	49,008	-0.6%
Delaware County	48,055	47,980	-0.2%	46,717	-2.6%
Tioga County	51,784	51,125	-1.3%	48,337	-5.5%
Susquehanna County (PA)	42,238	43,356	2.6%	61,630	42.1%
Southern Tier Region	657,297	657,909	0.1%	643,719	-2.2%
New York State	18,976,457	19,378,102	2.1%	19,697,021	1.6%
United States	281,421,906	308,745,538	6.2%	333,896,000	8.1%

Sources: 2000 and 2010 data from U.S. Census Bureau, Decennial Census, Summary File 2. Population projections for the U.S. from the U.S. Census Bureau, 2012 National Projections; for New York counties from Cornell University's Program on Applied Demographics; and for Susquehanna County, PA from the Pennsylvania State Data Center.

Between 2010 and 2020, Broome County is projected to decline by approximately 850 residents, or -0.4%. Most surrounding counties are also expected to decrease in population. The sole exception appears to be Susquehanna County in Pennsylvania, which is projected to have a dramatic increase. The Pennsylvania State Data Center formulated its projections in 2008, however, and County planners do not believe that this unusually high rate of growth will hold up.¹

Individuals born outside the United States comprise less than 6% of the Broome County population overall, but they represent approximately 15% of the student enrollment at Binghamton University, one of the top U.S. universities for international students. Between 2000 and 2010, the number of foreign-born residents in the county increased by 7.8%, to 11,361. Of these, 45.8% were born in Asia, 31.9% in Europe, and 15.4% in Latin America. More than 60% are naturalized U.S. citizens.

¹ "Census reveals ups, downs and questions," *Susquehanna Independent Weekender*, March 30, 2011.



Age/Age Cohorts

The generational mix in Broome County and the Southern Tier region is consistent with state and national trends and reflects an aging population. In 2010, Broome County had a median age of 40.2. In neighboring counties, the median age ranged from 35.8 in Cortland County to 45.4 in Delaware County, compared to 38.0 for New York State.

Table 2: Median Age and Age Cohorts

	Median Age	Under Age 20	20-24	25-54	55-64	Age 65 and Over
Broome County	40.2	24.3%	8.9%	37.9%	12.6%	16.3%
Chenango County	42.9	25.2%	5.0%	39.1%	14.0%	16.6%
Cortland County	35.8	26.8%	11.7%	36.3%	12.1%	13.1%
Delaware County	45.4	23.6%	5.9%	35.6%	15.4%	19.4%
Tioga County	42.5	25.8%	4.9%	40.4%	13.2%	15.7%
Susquehanna County (PA)	45.1	23.6%	4.7%	38.7%	14.9%	18.1%
New York State	38.0	25.3%	7.3%	42.0%	11.9%	13.5%
United States average	37.2	27.0%	7.0%	41.2%	11.8%	13.0%

Source: U.S. Census Bureau, 2010 Census, Summary File 2.

Although employed individuals age 16 years and over are counted as part of the labor force, the prime working age population is considered to be the 25-54 age cohort. This is when the likelihood of labor force participation is highest.

As shown in **Table 2**, of the 200,600 people living in Broome County, 75,931 (37.9%) were between the ages of 25 and 54 in 2010, while 25,201 (12.6%) were ages 55 to 64. Compared to the state, Broome County has a higher proportion of residents age 65 and over. Generally speaking, these individuals are more likely to be retired and not available to participate in the labor force.

Over the next ten years, the aging of the population will continue to have a dramatic impact on the size and composition of the workforce. With limited growth expected in Broome County, the working-age population will begin to comprise a smaller share of the population, as people now in the 55-64 age cohort start to retire.

Educational Attainment

As shown in **Table 3**, educational attainment levels in Broome County are somewhat typical of upstate New York, showing a higher rate of high school completion than state and national averages. According to the Census Bureau, an estimated 119,000 Broome County residents age 25 and older (or 89%) had at least a high school diploma or its equivalent compared with 84.8% in New York State, while 34,000 (25.5%) had a bachelor's degree or higher. Compared to its neighbors, Broome County had a larger percentage of adults with a graduate or professional degree (11.6%).



Table 3: Educational Attainment, Adults Age 25 and Older

Adults Age 25 and Older	% with High School Diploma or Higher	% Bachelor's Degree or Higher	% Graduate or Professional Degree
Broome County	89.0	25.5	11.6
Chenango County	87.0	17.7	7.5
Cortland County	89.8	23.4	9.9
Delaware County	86.3	19.5	8.2
Tioga County	91.0	22.2	9.5
Susquehanna County (PA)	89.0	17.4	6.3
New York State	84.8	32.6	14.0
United States average	85.6	28.2	10.5

Source: U.S. Census Bureau, 2009-2011 American Community Survey 3-Year Estimates.

In terms of educational attainment by age (**Table 4**), the proportion of the population with a four-year, graduate, or professional degree is more than 30% among Broome County residents between the ages of 25 and 34, and 27.9% among those ages 35 to 44. This is higher than among the same age cohorts in neighboring counties.

Table 4: Educational Attainment by Age Group, Adults Age 25 and Older

	Broome County	Chenango County	Cortland County	Delaware County	Tioga County	Susquehanna County (PA)
Ages 25 to 34						
% Bachelor's Degree or Higher	30.1	17.6	26.4	18.0	26.7	21.5
% Graduate or Professional Degree	13.2	7.4	7.1	4.1	11.0	4.5
Ages 35 to 44						
% Bachelor's Degree or Higher	27.9	21.1	25.9	20.1	24.6	18.7
% Graduate or Professional Degree	12.8	9.9	12.4	7.7	11.5	5.8
Ages 45 to 64						
% Bachelor's Degree or Higher	27.1	19.4	23.9	20.3	23.6	18.1
% Graduate or Professional Degree	12.3	8.0	9.7	8.7	10.5	7.3
Age 65 and over						
% Bachelor's Degree or Higher	18.0	12.0	17.8	18.6	14.8	13.1
% Graduate or Professional Degree	8.4	4.9	10.1	9.4	5.2	6.0

Source: U.S. Census Bureau, 2009-2011 American Community Survey 3-Year Estimates.

Labor Force

The labor force includes people who are currently employed and those who are unemployed and seeking jobs. In contrast to employment by industry data, the estimates in the table below are by place of residence, rather than place of work.



Table 5: Resident Labor Force

	1990	2000	2011	% Change, 1990-2000	% Change, 2000-2011
Broome County	105,000	98,300	93,400	-6.4%	-5.0%
Chenango County	25,200	24,500	24,600	-2.8%	0.4%
Cortland County	24,600	24,200	24,200	-1.6%	0.0%
Delaware County	21,700	22,200	21,600	2.3%	-2.7%
Tioga County	26,300	26,600	25,000	1.1%	-6.0%
Susquehanna County (PA)	18,300	20,400	23,100	11.5%	13.2%
Southern Tier Region	326,700	322,800	316,300	-1.2%	-2.0%
New York State	8,808,900	9,167,000	9,504,200	4.1%	3.7%

Source: NYS Department of Labor and PA Department of Labor and Industry, Local Area Unemployment Statistics, and E.M. Pemrick and Company.

On average, there were 93,400 residents in the labor force in Broome County in 2011, with 8,000 seeking jobs, resulting in an unemployment rate of 8.5%. As of February 2013, there were 8,800 people in Broome County actively looking for work, with an unemployment rate of 9.5%.

The labor force participation rate is the labor force (employed and unemployed) divided by the population age 16 and over. It is one indication of whether more people might be drawn into the labor force if suitable jobs were available or wages were higher. According to the U.S. Census Bureau, Broome County has a labor force participation rate of 59.6%. The rate for New York State is 63.6%.

Table 6: Labor Force Participation Rates

Broome County	59.6%
Chenango County	60.3%
Cortland County	60.1%
Delaware County	58.9%
Tioga County	66.6%
Susquehanna County (PA)	60.9%
New York State	63.6%

Source: U.S. Census Bureau, 2009-2011 American Community Survey 3-Year Estimates.

The labor force participation rate can be influenced by the number of residents, particularly those between the ages of 16 and 24, who are still attending school. Tompkins County, which also has a sizable college student population, has a labor force participation rate of 60.4%.

Consistent with local population trends, the size of the labor force in Broome County is declining. Between 1990 and 2011, the resident labor force declined by more than 11,000. Of the surrounding counties, only Susquehanna County had a net increase in its labor force.



Employment by Occupation

Table 7 below presents employment in the Southern Tier region by occupational category.² While information on industry relates to the type of business conducted by a person's employer, occupation describes the kinds of work a person performs on the job.

Table 7: Occupational Employment Statistics, Southern Tier Region

Occupational Group	Employment		Median Annual Wages
	Number	Percent	
Office and Administrative Support	44,340	16.7%	\$29,220
Education, Training, and Library	28,010	10.6%	\$46,950
Sales Related	24,490	9.2%	\$22,370
Food Preparation and Serving Related	21,990	8.3%	\$18,960
Production Related	20,900	7.9%	\$32,240
Health Care Practitioners and Technicians	18,850	7.1%	\$58,370
Transportation and Material Moving	13,100	4.9%	\$27,560
Health Care Support	10,530	4.0%	\$27,460
Management	10,370	3.9%	\$85,380
Installation, Maintenance, and Repair	9,700	3.7%	\$37,560
Construction and Extraction	9,540	3.6%	\$40,050
Building and Grounds Cleaning and Maintenance	9,210	3.5%	\$22,500
Business and Financial	8,390	3.2%	\$56,410
Architecture and Engineering	7,480	2.8%	\$69,210
Personal Care and Service	6,940	2.6%	\$20,750
Community and Social Services	5,600	2.1%	\$39,940
Protective Service	5,130	1.9%	\$49,210
Computer and Mathematical	4,060	1.5%	\$59,900
Arts, Design, Entertainment, Sports, and Media	2,820	1.1%	\$37,160
Life, Physical, and Social Science	2,110	0.8%	\$55,670
Legal	1,060	0.4%	\$85,950
Farming, Fishing, and Forestry	430	0.2%	\$29,260
Total, All Occupations	265,070	100.0%	\$33,920

Source: New York State Department of Labor, Occupational Employment Statistics Survey, and E.M. Pemrick and Company.

Six major occupational groups account for 60% of the total employment in the Southern Tier region: office and administrative support, education and training, sales related, food preparation, production related, and health care practitioners and technicians.

Generally speaking, about 63% of the workforce in the region is in traditionally “white-collar” occupations and 20% is in traditionally “blue-collar” occupations; the remaining 16% are employed in

² Based on the Standard Occupational Classification (SOC) system, which organizes the occupations held by workers into 22 major occupational categories. Data are provided for the Southern Tier region rather than the Binghamton MSA to facilitate comparison with the long-term projections (which are only available by region) in the next section.



service occupations. Compared to the U.S. as a whole, the Southern Tier has a higher concentration of its workforce (as indicated by location quotients exceeding 1.20) in education, training, and library occupations (1.61), architecture and engineering (1.57), community and social services (1.41), and health care practitioners and technicians (1.28). Many of these occupations are associated with key sectors of the economy, such as education and health care, although engineers are employed by a broad spectrum of industries.

A recent report from the NYS Department of Labor examines science and engineering (S&E) jobs in the state based on National Science Foundation definitions. In 2010, there were 312,660 S&E jobs in New York State, accounting for 3.7% of all statewide employment. *Within* the state, the share of the workforce engaged in S&E occupations was highest in the Southern Tier region, at 5.2%. The Southern Tier workforce also had the highest proportion of engineers, physical scientists, and mathematical scientists than any other region. The article concludes: “While most S&E jobs require more years of college, the stronger employment outlook and higher wages they offer often seem worth the investment.” Workers with skills in science and engineering are expected to be in great demand as the economy becomes more knowledge-intensive.³

Occupations in Demand

Workforce projections developed by the NYS Department of Labor indicate that the *fastest growing* occupational categories in the Southern Tier over the ten-year period from 2010 to 2020 will be personal care and service occupations, health care support occupations, health care practitioners and technical occupations, and computer and mathematical occupations (**Table 8**). However, the top occupational categories will have the largest number of openings, mostly to replace existing workers who change jobs or retire.

³ “Down to a Science: Science and Engineering Jobs in NYS,” *Employment in New York State*, July 2011. Accessed at <http://www.labor.ny.gov/stats/pdfs/enys0711.pdf>.



Table 8: Long-Term Workforce Projections by Occupational Categories, Southern Tier

Description	Projected Change, 2010-20		Annual Average Openings	
	Percent	Net	Replacement*	Total**
Personal Care and Service	18.1%	2,070	270	480
Health Care Support	12.9%	1,540	170	320
Health Care Practitioners and Technicians	12.2%	2,660	440	710
Computer and Mathematical	10.7%	510	100	150
Transportation and Material Moving	9.6%	1,480	370	520
Community and Social Services	9.6%	640	150	210
Food Preparation and Serving Related	8.1%	1,880	860	1,050
Construction and Extraction Occupations	8.1%	1,030	270	380
Business and Financial	7.6%	780	210	290
Legal	7.1%	130	30	40
Arts, Design, Entertainment, Sports, and Media	7.0%	430	160	210
Installation, Maintenance, and Repair	6.8%	740	240	320
Building/Grounds Cleaning and Maintenance	5.6%	700	220	290
Education, Training, and Library	5.6%	1,860	680	870
Sales Related	5.5%	1,500	870	1,030
Life, Physical, and Social Science	3.9%	100	80	100
Protective Service	2.0%	110	140	160
Office and Administrative Support	1.8%	890	1,030	1,230
Production Related	0.4%	90	440	530
Management	0.3%	40	280	310
Architecture and Engineering	-0.4%	-30	180	200
Total, All Occupations	6.2%	19,140	7,210	9,410

Source: New York State Department of Labor, Occupational Employment Statistics Survey, and E.M. Pemrick and Company.

* - Net replacement openings is an estimate of the need for new work force entrants to replace workers who leave an occupation and start working in another occupation, stop working altogether (i.e., retire) or leave the geographic area.

** - Total job openings represent the sum of employment increases and net replacements. If employment change is negative, job openings due to growth are zero and total job openings equals net replacements.

Other categories projected to grow at above-average rates in the eight-county region include transportation and material moving occupations, community and social services occupations, food preparation and serving related occupations, and construction occupations.

Workforce Commutation Patterns

Produced by the U.S. Census Bureau in conjunction with the Local Employment Dynamics program, OnTheMap is an online application that provides information on where workers are employed and where they live with companion reports on age, earnings, industry distribution, and other local workforce indicators. It can be used to determine where workers who are employed in a specific geographic location live, how many jobs are located within a certain distance of an educational



facility, or what the workplace destinations are for residents living in a particular neighborhood. The data provide planners, economic development specialists, job seekers, employers, and other users with information needed to understand workforce commutation patterns.

The figures below indicate where individuals *employed* in Broome County live. The analysis is restricted to those working in primary jobs as of 2010, the most recent year for which data are available.⁴ (Primary jobs include both public- and private-sector jobs covered under the state unemployment insurance system. A *primary* job is the highest paying job for an individual worker for the year.)

In the map below, employment locations in the County are represented by the blue thermal density overlay showing jobs per square mile. Work locations are also aggregated into census blocks in the Points Overlay – each block represented by one blue dot. The map reflects the fact that employment is concentrated in the City of Binghamton and stretches west into Johnson City, Endicott, and eventually Owego (Tioga County) along Route 17. There are also clusters of employment at industrial parks in Conklin and Kirkwood.

Overall, 68.1% of those employed in Broome County reside within the Binghamton MSA; this includes approximately 51,393 Broome County residents and 5,855 commuting from neighboring Tioga County. Many workers travel from other metro areas in upstate New York, including Syracuse (3.3%), Albany-Schenectady-Troy (2.4%), Rochester (2.1%), and Buffalo-Niagara Falls (1.2%). Broome County also attracts in-commuters from as far away as the New York-Northern New Jersey-Long Island metropolitan area. The proportion of workers from “downstate” is surprisingly high – 3.9% - but these employees do not appear to be concentrated at any one location.⁵

Table 9: Job Counts by Distance Traveled from Home, Broome County Laborshed

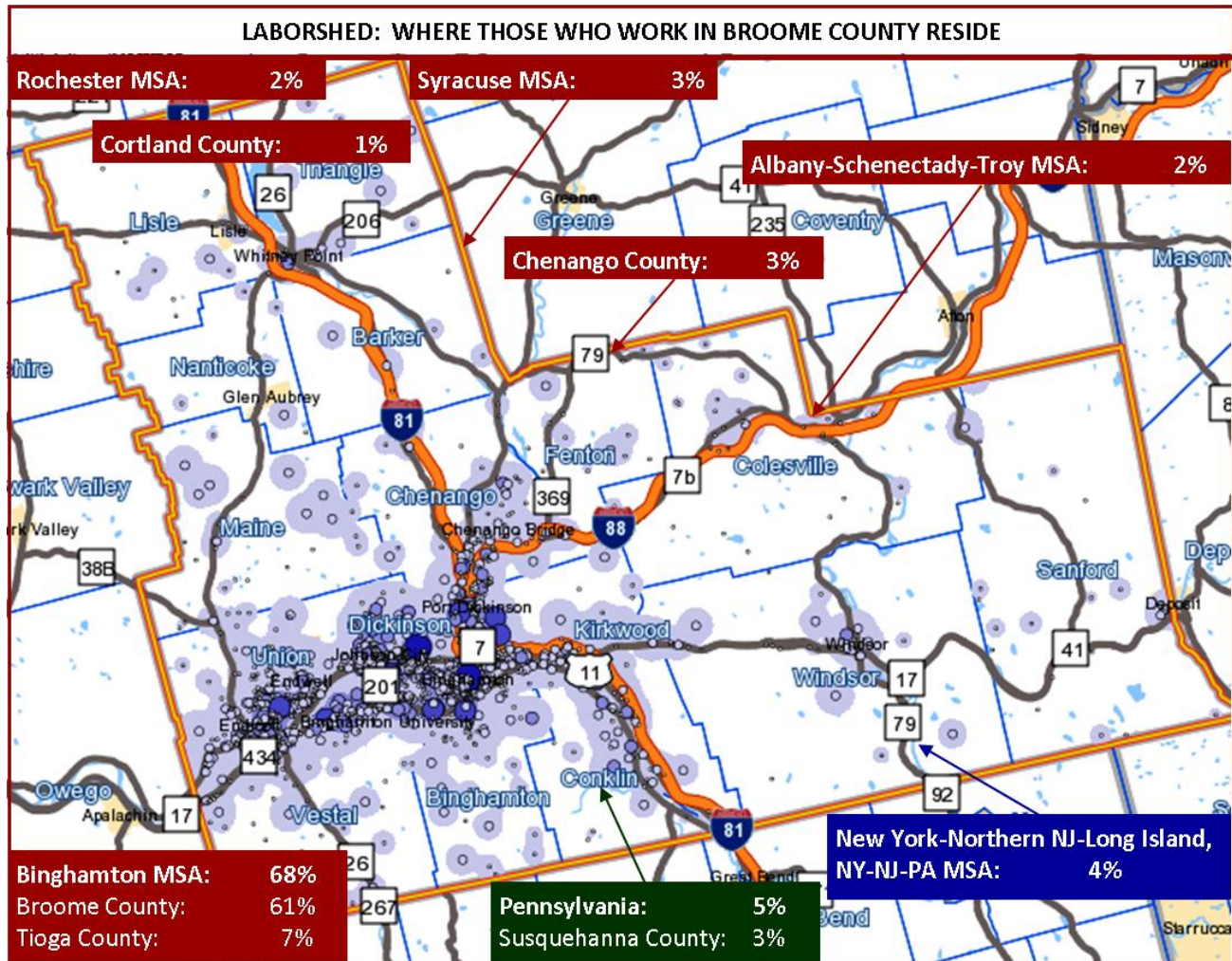
	Count	Share
Less than 10 miles	46,996	55.9%
10 to 24 miles	13,829	16.5%
25 to 50 miles	5,269	6.3%
Greater than 50 miles	17,929	21.3%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics. Note: Due to differences in methodology, the job counts shown are not comparable to those from other sources.

Broome County draws a sizable part of its workforce, about 5%, from over the border in Pennsylvania. The majority (2,726) commute from adjacent Susquehanna County, with several hundred coming from Bradford County.

⁴ Data used to develop the Laborshed and Commutershed profiles was extracted from the U.S. Census Bureau, Local Employment Dynamics (LED) Origin-Destination Database which is utilized in LED's OnTheMap application.

⁵ Initially, it was speculated that the 3,298 workers from the NYC metro area might be employees of BAE and IBM, both of which have facilities downstate. It turns out, however, that these workers from downstate are employed in multiple communities, including the City of Binghamton (1,039) and the Towns of Union (846), Vestal (606), and Dickinson (503). The majority are employed in the service sector: e.g., education, health care, or professional services.

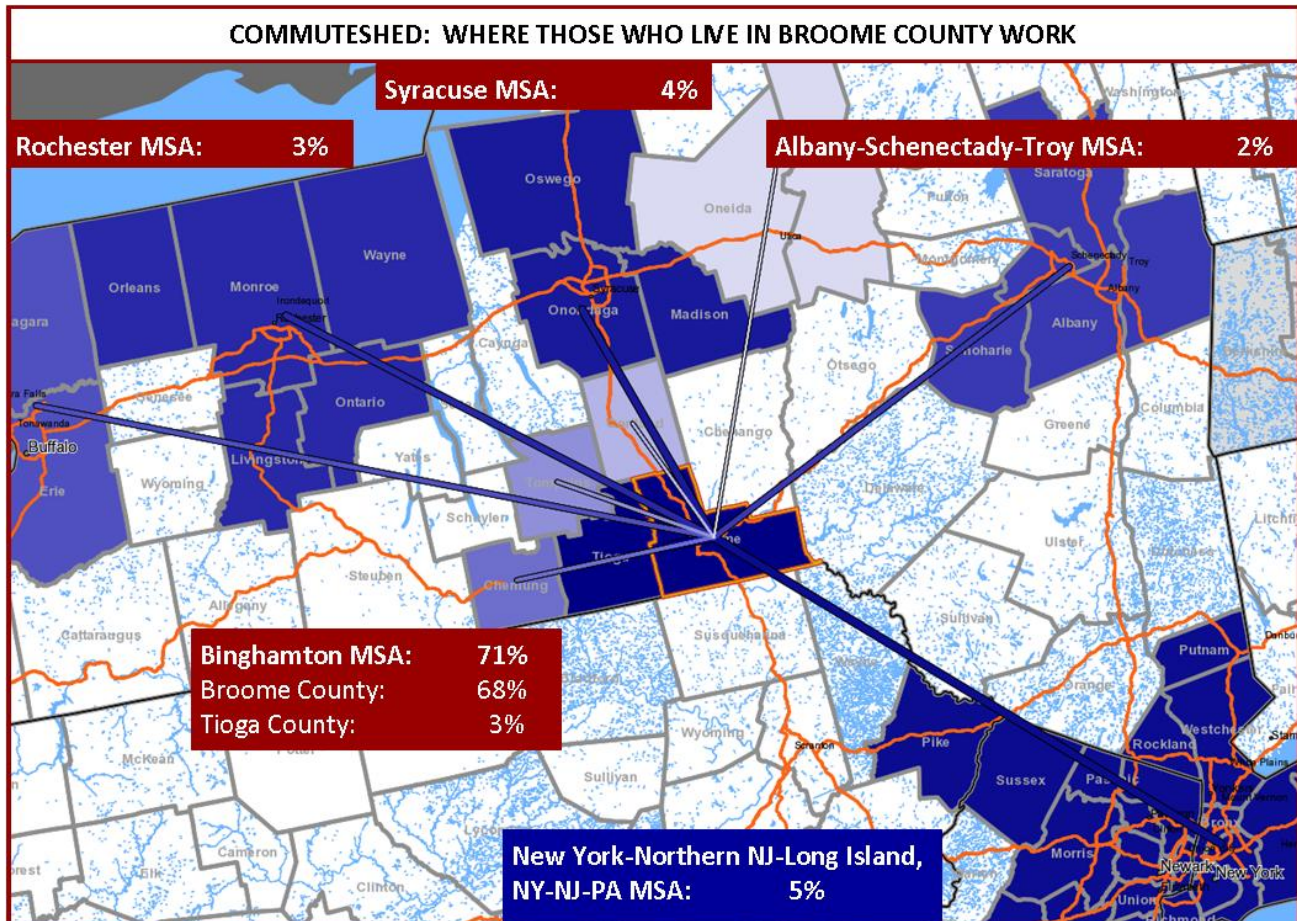


The commuted, the area in which Broome County residents are employed, is slightly more compact than the labor shed (because the County is a net importer of labor). Approximately 72% of County residents work in the Binghamton MSA, most in Broome County itself. Nearly 3,000 residents (3.9%) commute to work in the Syracuse metro area and 1,944 (2.6%) to the Rochester metro area. Relatively few Broome County residents are employed in Pennsylvania. However, more than 5% of those who reside locally apparently commute to jobs (mostly in the service sector) based in the New York City metropolitan area.

Table 10: Job Counts by Distance Traveled from Home, Broome County Commuted

	Count	Share
Less than 10 miles	46,127	61.1%
10 to 24 miles	9,221	12.2%
25 to 50 miles	3,603	4.8%
Greater than 50 miles	16,605	22.0%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics. Note: Due to differences in methodology, the job counts shown are not comparable to those from other sources.



Of the more than 30,000 people leaving the Binghamton metro area to work each day, 8,589 (28%) are young people age 29 and under. These young adults are more likely than workers of other ages to travel more than 50 miles for employment.

The data from OnTheMap clearly show that Broome County has a relatively large laborshed, drawing workers from other parts of upstate New York as well as Pennsylvania and the New York City metropolitan area. On the other hand, the majority of employed residents living in Broome County work in the Binghamton MSA. Broome County's geographic location and interstate access facilitate travel to and from other regions of the state. This is an asset not only for the local workforce, but also for the companies that locate in Broome County.

Employment Dynamics

This section assesses various employment dynamics in Broome County based on data from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program. The LEHD program provides Quarterly Workforce Indicators (QWIs) including employment, new hiring activity,



turnover rates, and earnings that can be analyzed by geography, age, gender, and educational attainment.⁶

Employment by Age

The majority of those employed by the private sector in Broome County are between the ages of 25 and 54 – prime working-age – with the largest share (24.8%) comprised of individuals ages 45 to 54.

The aging of the Baby Boom generation has led to an increase in the proportion of workers age 55 years and older, however. In 2000, 12.3% of workers in private industry in Broome County were age 55 and over, while 20.8% are in this age group today. At the same time, the percentage of workers in the 25-54 age group declined from 69.8% to 63.4%.

As shown in **Table 11**, 16.4% of workers in private industry in Broome County are 55-64 and 4.4% are age 65 and over. Industry sectors with higher than average percentages of older workers include manufacturing (27.3%), real estate and rental and leasing (27.0%), finance and insurance (26.2%), and transportation and warehousing (25.3%). More than one in four workers employed in the production of computers and electronics, machinery, and fabricated metals is age 55 and over. There is also a relatively high proportion of retirement-age workers among insurance carriers and social assistance providers in Broome County.

Industries with a high proportion of workers approaching retirement age may need to plan for increased recruiting efforts and training programs to address the loss of older workers. Possible options include bringing in experienced employees from outside the region, hiring individuals with similar skills from other industries, or encouraging workers to delay their retirement by offering flexible schedules or higher pay. It is likely that some job openings will remain vacant, with responsibilities shifted to other employees. Training and mentoring will be necessary to minimize the loss of institutional knowledge. Employers may look to technology to reduce their reliance on labor. Technological changes not yet identified could even make certain categories of employment obsolete.

⁶ Due to differences in methodology, QWI employment counts are not comparable to those from other sources.
Workforce Profile



Table 11: Broome County Workforce Distribution by Age Group

	Young		Prime Working-Age		Pre- and Post-Retirement Age		Total,
	14-24	25-34	35-44	45-54	55-64	65-99	55+
All Industry Sectors (Public and Private)	13.5%	19.1%	18.8%	26.1%	17.8%	4.7%	22.5%
All Private Industry Sectors	15.8%	20.2%	18.4%	24.8%	16.4%	4.4%	20.8%
Manufacturing	5.0%	13.3%	18.2%	36.1%	24.2%	3.1%	27.3%
Real Estate and Rental and Leasing	9.9%	19.3%	19.1%	24.7%	19.6%	7.4%	27.0%
Finance and Insurance	4.7%	19.2%	20.8%	29.0%	20.6%	5.6%	26.2%
Transportation and Warehousing	8.3%	14.7%	22.5%	29.0%	18.8%	6.5%	25.3%
Other Services	17.6%	18.9%	17.4%	21.2%	16.6%	8.2%	24.8%
Professional and Technical Services	7.2%	23.2%	19.2%	25.8%	18.2%	6.3%	24.5%
Health Care and Social Assistance	10.0%	20.7%	19.5%	25.5%	19.4%	4.7%	24.1%
Management of Companies	11.3%	19.5%	22.0%	25.1%	17.9%	4.2%	22.0%
Information	8.7%	25.6%	21.7%	24.2%	16.7%	3.0%	19.7%
Wholesale Trade	10.0%	20.3%	22.7%	27.8%	15.2%	4.0%	19.2%
Arts, Entertainment, and Recreation	29.0%	18.8%	15.2%	18.1%	13.2%	5.4%	18.6%
Retail Trade	29.3%	20.0%	14.9%	17.5%	12.9%	5.3%	18.2%
Administrative and Waste Services	17.5%	25.7%	18.4%	21.5%	12.8%	4.0%	16.8%
Construction	9.8%	23.3%	23.3%	29.7%	10.9%	2.9%	13.8%
Accommodation and Food Services	39.6%	25.0%	13.6%	13.0%	6.4%	2.3%	8.7%
Selected Industries (with NAICS Codes)							
Computer and Electronic Product Mfg (334)	2.3%	12.1%	15.7%	39.1%	28.3%	2.5%	30.7%
Insurance Carriers & Related Activities (524)	3.5%	16.4%	21.2%	30.2%	22.5%	6.2%	28.7%
Machinery Manufacturing (333)	3.1%	11.1%	16.0%	41.6%	26.6%	1.5%	28.1%
Fabricated Metal Product Mfg (332)	5.1%	12.7%	19.9%	34.3%	22.6%	5.1%	27.7%
Social Assistance (624)	11.1%	21.8%	18.5%	23.0%	18.8%	6.6%	25.4%
Ambulatory Health Care Services (621)	6.8%	18.4%	22.6%	27.3%	19.4%	5.6%	24.9%
Hospitals (622)	9.0%	21.4%	18.5%	26.4%	21.0%	3.6%	24.6%
Truck Transportation (484)	5.1%	14.3%	24.5%	32.7%	18.6%	4.8%	23.4%
Merchant Wholesalers Durable Goods (423)	8.2%	17.8%	22.1%	29.0%	17.4%	5.4%	22.7%
Nursing and Residential Care Facilities (623)	16.1%	21.1%	18.9%	23.3%	15.7%	4.7%	20.4%
Credit Intermediation & Related (522)	8.4%	26.8%	21.2%	25.7%	14.6%	3.3%	17.9%
Food Manufacturing (311)	15.4%	15.4%	21.5%	30.7%	15.2%	1.4%	16.6%
Merchant Wholesalers Nondurables (424)	11.0%	22.2%	23.5%	27.0%	13.1%	3.1%	16.1%
Specialty Trade Contractors (238)	9.8%	23.5%	24.2%	29.2%	10.3%	3.0%	13.3%
Heavy/Civil Engineering Construction (237)	10.4%	25.4%	22.7%	28.6%	10.2%	2.7%	12.9%

Source: U.S. Census Bureau, Local Employment Dynamics Program. Quarterly Workforce Indicators (QWI) data; based on averages for last 4 quarters, ending Q1 2012. Unless otherwise noted, all industries listed are private sector only. Some sectors not shown.



Table 12: Broome County Workforce Distribution by Gender and Educational Attainment

	Age 25 and Over Only					
	Male	Female	Less than HS	HS Diploma	Some College or Associate	Bachelor's Degree or Higher
All Industry Sectors, Public and Private	49.2%	50.8%	8.9%	30.0%	33.4%	27.7%
All Private Industry	50.8%	49.2%	10.1%	31.8%	33.7%	24.4%
Professional and Technical Services	48.5%	51.5%	5.2%	21.7%	31.0%	42.1%
Finance and Insurance	37.3%	62.7%	4.8%	22.4%	32.9%	39.9%
Information	56.8%	43.2%	7.0%	25.1%	31.0%	36.9%
Health Care and Social Assistance	21.3%	78.7%	7.2%	27.0%	38.3%	27.4%
Management of Companies	41.8%	58.2%	7.5%	29.9%	35.2%	27.0%
Manufacturing	71.6%	28.4%	9.2%	33.3%	32.5%	25.0%
Arts, Entertainment, and Recreation	51.3%	48.7%	10.4%	31.6%	32.9%	25.0%
Other Services	41.5%	58.5%	11.2%	32.5%	33.9%	22.3%
Wholesale Trade	78.3%	21.7%	10.2%	34.8%	33.8%	21.3%
Real Estate and Rental and Leasing	65.9%	34.1%	12.6%	33.7%	33.5%	20.1%
Administrative and Waste Services	61.4%	38.6%	14.7%	34.6%	32.2%	18.5%
Transportation and Warehousing	80.5%	19.5%	12.0%	37.5%	33.0%	17.6%
Retail Trade	50.1%	49.9%	12.8%	38.1%	32.7%	16.4%
Accommodation and Food Services	46.1%	53.9%	17.7%	37.4%	30.0%	14.8%
Construction	88.7%	11.3%	13.8%	39.6%	31.7%	14.8%
Selected Industries (with NAICS Codes)						
Insurance Carriers & Related Activities (524)	39.2%	60.8%	4.4%	21.9%	33.2%	40.6%
Credit Intermediation & Related (522)	31.5%	68.5%	6.0%	24.7%	33.6%	35.7%
Computer and Electronic Product Mfg (334)	69.0%	31.0%	6.0%	26.5%	33.1%	34.4%
Ambulatory Health Care Services (621)	20.8%	79.2%	5.8%	24.7%	37.6%	31.9%
Hospitals (622)	21.1%	78.9%	6.1%	25.5%	39.6%	28.8%
Machinery Manufacturing (333)	79.7%	20.3%	7.8%	31.5%	34.2%	26.5%
Social Assistance (624)	22.8%	77.2%	9.9%	30.8%	36.8%	22.6%
Nursing and Residential Care Facilities (623)	21.2%	78.8%	9.8%	31.1%	37.3%	21.8%
Merchant Wholesalers Durable Goods (423)	78.0%	22.0%	9.9%	36.1%	33.2%	20.8%
Merchant Wholesalers Nondurables (424)	79.2%	20.8%	10.6%	35.1%	34.4%	19.9%
Food Manufacturing (311)	67.4%	32.6%	10.2%	40.5%	33.0%	16.3%
Truck Transportation (484)	87.2%	12.8%	11.7%	39.8%	32.6%	15.9%
Heavy/Civil Engineering Construction (237)	89.3%	10.7%	13.6%	41.0%	30.1%	15.3%
Specialty Trade Contractors (238)	89.2%	10.8%	14.0%	39.1%	32.5%	14.4%
Fabricated Metal Product Mfg (332)	83.4%	16.6%	12.8%	41.3%	32.0%	13.9%

Source: U.S. Census Bureau, Local Employment Dynamics Program. Quarterly Workforce Indicators (QWI) data; based on averages for last 4 quarters, ending Q1 2012. Unless otherwise noted, all industries listed are private sector only. Some sectors not shown.



Employment by Gender

As indicated by the data in **Table 12**, the workforce in Broome County is about evenly split between men and women. There are, however, several industry sectors in which either men or women predominate. Among the sectors in which men comprise 70% or more of the workforce are construction, transportation and warehousing, wholesale trade, and manufacturing. The only sector in which women account for a significantly greater share of the workforce is health care and social assistance.

These characteristics are generally consistent with those for the state as a whole: in New York State, the workforce in the construction and transportation and warehousing sectors is disproportionately male, while workers employed in health care and social assistance are disproportionately female.

Employment by Educational Attainment

The LEHD program captures QWI data on the educational attainment of workers in four categories: 1) those with less than a high school diploma; 2) those with a high school diploma or its equivalent; 3) those who have attended some college or have an associate degree; and 4) those who have a bachelor's degree or higher. The data are restricted to workers age 25 years and over.

In **Table 12**, industry sectors are ranked by the percentage of workers with at least a bachelor's degree. Professional and technical services, finance and insurance, and information are the top three sectors; more than a third of the workforce in each of these sectors has a bachelor's degree or higher. Health care and social assistance and management also have above-average proportions of workers with at least a bachelor's degree.

Other industries on the list have lower levels of educational attainment. Construction and hospitality are tied for the lowest, with fewer than 15% of workers possessing a four-year degree.

Contrary to the perception that the manufacturing workforce is not well-educated, there are relatively high rates of educational attainment among workers in computer and electronics and machinery manufacturing in Broome County. Banking and insurance employees also have high levels of educational attainment.

Although each industry relies on a different mix of occupations and skills, understanding the educational attainment of the incumbent workforce in Broome County can help to identify the minimal educational requirements for employment.



New Hires

In the first quarter of 2012, there were more than 10,000 new hires across all industry sectors in Broome County (**Table 13**). Nearly two-thirds of the hiring activity occurred in five industry sectors: accommodation and food services, retail trade, administrative services and waste management, health care, and construction.

Table 13: Volume of New Hires by Industry and Age, Broome County

	Total	14-24	25-44	45-54	55-64	65-99
All NAICS Sectors, Public and Private	10,515	4,109	4,140	1,415	674	177
All Private Industry	9,645	3,748	3,841	1,311	591	154
Accommodation and Food Services	1,880	1,068	615	133	47	17
Retail Trade	1,625	829	536	156	81	23
Administrative and Waste Services	1,437	476	664	197	80	20
Health Care and Social Assistance	1,154	349	507	189	89	20
Construction	831	160	404	193	64	10
Manufacturing	523	150	206	107	52	8
Other Services	456	182	172	56	32	14
Wholesale Trade	449	127	201	82	35	4
Professional and Technical Services	291	90	124	40	27	10
Government	267	117	75	37	30	8
Arts, Entertainment and Recreation	241	130	75	22	14	0
Real Estate and Rental and Leasing	164	46	74	26	14	4
Transportation and Warehousing	144	33	61	30	16	4
Information	141	48	61	22	10	0
Finance and Insurance	112	30	53	20	9	0

Source: U.S. Census Bureau, Local Employment Dynamics Program. Quarterly Workforce Indicators (QWI) data; based on averages for last 4 quarters, ending Q1 2012. Unless otherwise noted, all industries listed are private sector only. Some sectors not shown.

It is important to note that *the number of new hires does not directly equate to an increase in total employment*. The new hires count is simply an indication of hiring activity in an industry. Workers may be hired to fill newly created jobs, or to replace workers who have left (or both). Separations, both voluntary (retirement, leaving for a new job) and involuntary (layoffs, firings) account for the other half of the employment change equation.

Men accounted for 53% of the new hires. With respect to age, the number of new hires ranged from 177 among those age 65 and over to 4,140 among those between the ages of 25 and 44.



The average monthly earnings of new hires across all industries were about \$2,000. The highest earnings for new hires were in finance and insurance, followed by manufacturing, construction, and professional and technical services. Within these sectors, average earnings were especially high for new hires in machinery manufacturing (\$5,987), computer and electronics manufacturing (\$5,888), and computer systems design and related services (\$5,872).⁷

A high ratio between new hire earnings and the earnings of all workers in that industry suggests that employees are being hired for high-level positions, or that there is an unusually strong demand for labor. This was the case with finance and insurance, construction, manufacturing, and arts, entertainment, and recreation, as well as with significant Broome County industries such as machinery manufacturing (112.1%), computer and electronics manufacturing (97.4%), insurance carriers (84.2%), and nondurable goods wholesalers (77.8%).

Table 14: New Hire Earnings by Industry, Broome County

	Average Monthly Earnings		Ratio of New Hires vs. All Workers
	New Hires	All Workers	
All NAICS Sectors, Public and Private	\$1,997	\$3,594	55.6%
All Private Industry	\$2,016	\$3,468	58.1%
Finance and Insurance	\$3,635	\$4,919	73.9%
Manufacturing	\$3,632	\$4,864	74.7%
Construction	\$3,394	\$4,381	77.5%
Professional and Technical Services	\$3,286	\$4,570	71.9%
Wholesale Trade	\$2,977	\$4,067	73.2%
Management of Companies	\$2,735	\$4,259	64.2%
Information	\$2,425	\$3,561	68.1%
Health Care and Social Assistance	\$2,349	\$3,897	60.3%
Transportation and Warehousing	\$2,328	\$3,342	69.7%
Real estate and Rental and Leasing	\$1,987	\$2,772	71.7%
Administrative and Waste Services	\$1,757	\$2,407	73.0%
Arts, Entertainment and Recreation	\$1,433	\$1,424	100.6%
Other Services	\$1,244	\$1,845	67.4%
Retail Trade	\$1,233	\$2,116	58.3%
Accommodation and Food Services	\$919	\$1,293	71.1%

Source: U.S. Census Bureau, Local Employment Dynamics Program. Quarterly Workforce Indicators (QWI) data; based on averages for last 4 quarters, ending Q1 2012. Unless otherwise noted, all industries listed are private sector only. Some sectors not shown.

Employee Turnover

The employee turnover rate is a measure of workforce stability; it measures the movement of workers into and out of jobs, including retirements. In Broome County, the average quarterly turnover rate for all private sector workers (over the last four quarters, ending Q1 2012) was 8.9%. This is comparable to a turnover rate of 9.0% for New York State overall during the same period.

Turnover rates vary by industry and age: for example, teens and young adults tend to have relatively high turnover rates, and employee turnover is generally higher in low-wage industries such as retail and food services.

⁷ NAICS 333, 334, and 5413, respectively.
Workforce Profile



Rates of turnover also indicate the extent to which employers will be able to find replacements for workers who are retiring or leaving for other jobs. Industries with relatively high turnover rates may find it easy to find replacements; those with low rates of turnover may face challenges in recruiting individuals with specific skill sets.

Local Employment Dynamics data indicate that in Broome County, the lowest employee turnover rates are in manufacturing, followed by finance and insurance. The turnover rate is particularly low in some of the County's largest industries: computer and electronics manufacturing (2.6%), insurance carriers (3.6%), and hospitals (3.9%).

On one hand, low employee turnover reflects a stable workforce. However, low rates of turnover combined with a large proportion of workers close to retirement age indicates the potential for labor shortages in certain industries. Indeed, as previously mentioned, there is a correlation between turnover and age.

The question is whether the aging of the workforce in Broome County can be addressed in the near future. As workers in certain industries begin to retire, will they be replaced with individuals with similar levels of educational attainment and skill? Are local colleges and universities and training providers preparing people for these jobs? Or will businesses in the County need to recruit people from other locations? These are questions that must be considered in the context of the comprehensive plan and economic development initiatives in Broome County, the Southern Tier, and New York State.

Table 15: Employee Turnover Rates in Selected Industry Sectors

	Broome County	New York State
All NAICS Sectors, Public and Private	7.9%	8.2%
All Private Industry	8.9%	9.0%
Construction	15.0%	12.6%
Manufacturing	4.6%	5.4%
Wholesale Trade	7.1%	6.5%
Retail Trade	11.2%	10.4%
Transportation and Warehousing	8.8%	8.0%
Information	5.8%	8.3%
Finance and Insurance	5.4%	6.2%
Professional and Technical Services	7.4%	8.3%
Health Care and Social Assistance	5.8%	7.4%
Accommodation and Food Services	15.4%	14.2%
Arts, Entertainment, and Recreation	20.3%	14.7%
Real Estate and Rental and Leasing	9.0%	6.5%
Management of Companies	5.6%	7.0%

Source: U.S. Census Bureau, Local Employment Dynamics Program. Quarterly Workforce Indicators (QWI) data; based on averages for last 4 quarters, ending Q1 2012. Unless otherwise noted, all industries listed are private sector only.

Education and Training Programs

Career and Technical Education

Broome-Tioga BOCES serves 15 school districts in the Binghamton MSA, including all 12 districts in Broome County. It offers Career and Technical Education (CTE), primarily on a half-day basis, to high school juniors and seniors from component districts. CTE courses provide students an opportunity to learn job skills through instruction and hands-on experience. Successful students



are prepared to enter the workforce, earn a technical degree, and/or advance to college with credits earned through articulation agreements. CTE content areas include:

- Automotive Technology
- Building Trades
- Business/Communications
- Health Science
- Manufacturing
- Personal Services (e.g., culinary arts, food industry, cosmetology)

According to Broome Tioga Workforce New York, the manufacturing program has been a “hard sell” to young adults, and BOCES no longer offers CNC/machining courses to high school students. Students in the building trades program attend classes in carpentry, masonry, and electricity. A plumbing/HVAC class is not currently offered due to the cost of equipment and the reorganization of class space on campus, but is expected to be reinstated in the future.

Other BOCES programs include New Visions, an academically rigorous program for college-bound high school seniors interested in careers in health, education, engineering, or law and government; alternative education for youth deemed to be at-risk; a GED program for students ages 16 to 21 who are unlikely to complete the requirements for a high school diploma; and adult CTE programs enabling participants to access employment or career advancement.

Colleges and Universities

An important aspect of the labor supply is college enrollment, and the number of annual graduates within specific programs. As of fall 2011, there were 20,946 students enrolled at Binghamton University and Broome Community College, the majority (86.2%) as undergraduates. If all post-secondary educational institutions in the Southern Tier plus neighboring Cortland County are counted, there are nearly 62,000 students attending colleges in and around Broome County.

Table 16: Colleges and Universities in the Region

Name	Location	Enrollment: Total / Undergraduate
Binghamton University (SUNY Binghamton)	Broome County	14,746 / 11,861
Broome Community College	Broome County	6,200 / 6,200
SUNY Cortland	Cortland County	7,331 / 6,371
Tompkins Cortland Community College	Tompkins County	5,662 / 5,662
Cornell University	Tompkins County	21,131 / 14,167
Ithaca College	Tompkins County	6,760 / 6,276

Source: U.S. Department of Education, National Center for Educational Statistics.



Within Binghamton University (BU) are seven schools and colleges: Harpur College of Arts and Sciences, Decker School of Nursing, the School of Management, Watson School of Engineering and Applied Science, the College of Community and Public Affairs, the School of Education, and the Graduate School. Harpur College comprises about 65% of undergraduate enrollment, followed by the Watson School, with 16%.

In the 2011-12 school year, Binghamton University (BU) awarded a total of 3,121 bachelor's degrees. The number of bachelor's degrees was highest in the social sciences (474); business, management, and marketing (452), including accounting and finance; psychology (297); engineering (290), including mechanical, industrial, and electrical engineering and bioengineering; biology and biomedical sciences (279); and English language and literature (243). BU also has a registered nursing program which had 169 graduates.

According to the BU website, 20% of undergraduates go on to receive a graduate degree from the university. In 2011-12, BU awarded 833 master's degrees, with the largest numbers in business (204) and engineering (137).

Broome Community College (BCC) awarded 1,046 associate's degrees in the 2011-12 school year. The number of two-year degrees was highest in liberal arts and sciences (435), health professions and related programs (185), and business (160). BCC has one of the largest health sciences programs of any community college in the state, drawing students from Pennsylvania as well as New York. It also has a strong engineering program; many graduates transition to engineering programs at BU.

Recognized as critical community assets, both Binghamton University and Broome Community College are continuing to pursue opportunities for growth: BU with the development of high-tech research centers to stimulate innovation and spin-off job creation; BCC with the creation of new facilities to house students from outside the County and accommodate an expanding hospitality program. Both institutions are involved with efforts to construct a high technology incubator in downtown Binghamton, and they maintain close relationships with many of the region's major employers, eager to contribute to Broome County's economic development.

Training

The Broome Tioga Workforce Investment Board (WIB) serves as the administrative entity for federal Workforce Investment Act (WIA) funds in Broome County. It operates the Broome Employment Center in Binghamton (and a similar facility in Owego, Tioga County), where visitors can receive information about demand occupations and training opportunities, access job listings, participate in computer workshops, or meet with an employment counselor for help finding a job.

According to the Broome Tioga Local Plan for FFY 2012, current and projected demand occupations in the local area include:

Workforce Profile



- **Health care practitioners and technical occupations:** Registered nurses, physical therapists, medical and clinical laboratory technicians, dental hygienists, emergency medical technicians and paramedics, licensed practical and licensed vocational nurses, medical records and health information technicians, physician assistants, nurse practitioners
- **Health care support occupations:** Home health aides, nursing aides, orderlies and attendants, occupational therapist assistants and aides, physical therapy assistants and aides, dental assistants, medical assistants, personal care aides
- **Transportation occupations:** Heavy and tractor-trailer truck drivers; laborers and freight, stock, and material movers; industrial truck and tractor operators, light truck or delivery service drivers
- **Production occupations:** Team assemblers, computer-controlled machine tool operators, multiple machine tool setters and operators, welders
- **Construction and extraction occupations:** Brick masons; carpenters; electricians; plumbers, pipe fitters, and steamfitters; construction workers; sheet metal workers

The plan adds: “Based on the number of job openings posted by regional employers, United Health Services and Lourdes Hospital, multiple extended care facilities and nursing homes, the Board has determined that all levels of Healthcare Support Occupations and Healthcare Practitioners are considered High Demand occupations in the Broome Tioga LWIA. Second to Healthcare occupations are occupations in the Transportation industry targeted primarily to tractor-trailer drivers and warehousing positions. Many of the driver openings are a result of the increased hauling of equipment and water related to the natural gas industry.”

Eligible Broome County residents can use federal WIA funds to pay for training programs that have been WIA-certified. Training programs consist of one or more courses that, upon successful completion, lead to credentials such as a diploma, industry-recognized certificate or licensure, associate degree, or bachelor's degree. The process provides standards that training providers must meet in order to receive WIA training dollars.

The NYS Department of Labor lists the following eligible training providers in Broome County:

- | | |
|-----------------------------------|---|
| ▪ Broome County Urban League | ▪ Local 325 IBEW Joint Apprenticeship Program |
| ▪ Broome Community College | ▪ Maines Driver Training Institute |
| ▪ Broome-Tioga BOCES | ▪ SAGE Truck Driving School CDL Training |
| ▪ Family Enrichment Network, Inc. | ▪ SUNY Empire State College |
| ▪ Link Environmental Services | ▪ Upstate Training |



Three of the providers – Family Enrichment Network, Maines Driver Training Institute, and the Sage Truck Driving School – offer CDL truck driver training. Others, including the Local 325 IBEW, Link Environmental Services, and Broome-Tioga BOCES, provide training in the construction trades. The vast majority of the training is through Broome-Tioga BOCES and Broome Community College. They offer certificate and associate's degree programs in fields such as accounting, office administration, computer science, health care, engineering technology, criminal justice and homeland security, hotel and restaurant management, and early childhood education.

The Broome Tioga WIB is currently involved in a sector-based training initiative to train individuals for employment in the gas extraction industry. Known as ShaleNET, this initiative is being funded by a three-year, multi-state grant from the U.S. Department of Labor. The mission of the grant is to design a comprehensive recruitment, training, placement, and retention program for high-priority occupations in the natural gas drilling and production industry throughout the Marcellus Shale footprint.

Applicants have been screened and assessed prior to enrolling in the ShaleNET training or in an introduction to gas drilling funded by the state. It is anticipated that 40-45 individuals will be trained for jobs related to this industry sector. Although New York State has not yet approved Marcellus shale gas extraction, it is anticipated that trained workers will be able to fill job openings in border Pennsylvania counties.

On-the-job training (OJT) contracts have also been a means for local employers to hire and train new employees. The Broome-Tioga WIB can reimburse employers for up to 90% of an individual's wages while that individual is participating in OJT. Some OJT contracts are paid for out of WIA funds, others through a National Emergency Grant OJT program. Broome-Tioga has been one of the major users of this statewide grant as it has been very successful in returning unemployed adults and dislocated workers back to employment.

Broome County companies with OJT contracts in FFY 2012 have included Arctic Bear Plumbing, BlueStorm Technologies, Crowley Fabricating, Devonian Stone, Evolution Consulting, Foam It Insulation, Modern Marketing Concepts, R&M Small Engine Repair, STCR Business Systems, TeamWorld, and Triple Cities Metal Finishing. The types of positions for which workers are being trained range from customer service and sales representatives to HVAC and small engine technicians, from data entry specialists to machinists and sheet metal fabricators. Nearly \$400,000 has been committed to OJT contracts to date.

The Broome-Tioga WIB is also engaged in a Chamber of Commerce OJT program that was awarded through a legislative member item. Broome-Tioga conducts much of the matching and completes all of the jobseeker assessment and required data entry; the Greater Binghamton Chamber of Commerce writes the contract and issues the payments to the employer. The additional funding has helped to increase job placements in the area.



Broome County Comprehensive Plan

Building our Future

Within the context of the Southern Tier REDC's Strategic Economic Development Plan, the Workforce Investment Boards in the Southern Tier, including the Broome-Tioga WIB, have committed to targeting resources and identifying additional resources to train or upgrade the skills of the energy sector workforce. The Energy Workforce Development Initiative will “develop a highly qualified and vibrant workforce prepared to respond to the opportunities resulting from the emergence of the energy industry in the Southern Tier for projects such as wind farm construction and maintenance; weatherization of homes, businesses, and public buildings for maximum efficiency; retrofit of residential and commercial facilities for efficiency improvements and installation of biomass heating systems; expanded research and manufacturing of existing and new solar energy technology products; increasing energy efficiency use in buildings through improved weatherization and application of electricity-saving technologies; and natural gas extraction and operations.”⁸ The intention of the initiative is to offer skills that are adaptable as the energy industry evolves. Other workforce development system tasks to implement regional strategies are shown in **Table 17**.

⁸ Southern Tier Regional Economic Development Council, *Strategic Economic Development Plan: 2011–2016*, p. 118.
Workforce Profile



Table 17: Southern Tier Workforce Development Priority Goals and Tasks, 2012 – 2013

Goal	Action Item	Tasks
Strategy 1. The Southern Tier... New York's Leader in Energy Efficiency and Renewable Energy Technology	Residential and Small Scale Commercial Retrofit	<ul style="list-style-type: none"> Assist customers in identifying and attending local BOCES and community colleges in renewable energy and energy efficiency-related programs. Pursue grant opportunities that target energy efficiency and renewable energy occupations.
	Energy Development Alliance for New York EDANY	<ul style="list-style-type: none"> Identify existing energy sector career marketing materials; review and create regional materials for marketing. Promote energy sector careers distribution of energy sector related marketing materials to youth, adults and dislocated workers. Jointly promote advanced manufacturing sector related careers utilizing the Workforce NY Career Centers in the Southern Tier region as well as connections with school districts, youth program providers, etc.
Strategy 2. Southern Tier Transportation Alliance: Building Next Generation Technology and Manufacturing	Southern Tier Transportation Industry Cluster	<ul style="list-style-type: none"> Assist customers in identifying and attending local BOCES and community colleges in advanced manufacturing related programs. This includes financial assistance, if funding is available. Seek out and fund on-the-job training opportunities with advanced manufacturing employers as funding is available. Identify and apply for additional advanced manufacturing training funding. Assist employers in posting their advanced manufacturing positions and searching the talent bank for qualified employees. Review existing health career marketing materials and career information, create new ones where necessary. Promote health careers through Workforce NY Career Centers in the Southern Tier, WIA youth programs, and existing relationships with other youth program providers and school districts. Assist employers in posting their health care positions and searching the talent bank for qualified employees.
Strategy 3. Health Care 2020... Integrating Health Care Providers, Higher Education and Cutting-Edge Technology	All	<ul style="list-style-type: none"> Assist employers in posting their advanced manufacturing positions and searching the talent bank for qualified employees.
Strategy 4. Revitalize the Rural Farm- and Forest-Based Economy	All	<ul style="list-style-type: none"> Assist businesses with recruitment for agricultural occupations
Strategy 5. Strengthen the Region's Economic Development Backbone	All	<ul style="list-style-type: none"> Assist employers in posting construction/building trades-related positions and searching the talent bank for qualified employees

Source: Southern Tier Regional Economic Development Council, *Strategic Economic Development Plan: 2011–2016* and Southern Tier REDC Workforce Development Work Group, *Work Plan Template – Workforce Development Priority Goals and Strategies, 2012–2013*.



Target Industry Analysis

Introduction

Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis include an economic profile of Broome County, a real estate assessment, a profile of the local workforce, a target industry analysis, and an incentive evaluation. This document is the fourth of five deliverables.

Identifying Target Industries

The project team's approach to selecting target industries incorporates the following:

1. Historic presence of any industries to indicate any residual competencies.
2. Current employment levels in and location quotients for specific industries and economic segments in the County.
3. Overall market trends that may impact the future growth of specific industries.
4. Industry focus at the state and regional levels.
5. The availability of resources required to support specific industries including:
 - Labor (availability and cost)
 - Transportation access (interstate, rail and air)
 - Utilities (availability, backup potential and cost)
 - Sites and buildings (location, cost and level of readiness)
 - Quality of life attributes to help attract talent (e.g., availability and cost of housing, property taxes, educational resources, health care, cultural and recreational options, retail)

Each of these factors was considered in the selection of target industries for Broome County. A summary of target industries and their rationale is provided below, followed by additional details that support the rationale.



Selection of Target Industries and Resource Assessment for Broome County

Target Industry: Health Care Services	
Description:	There is potentially some level of incremental growth for existing companies and organizations that will be driven by demographics (primarily the aging population).
Criteria for Evaluation	Discussion
Historic Presence of Industry	Health care has expanded significantly in Broome County over the past 130 years with the growth of both private and Catholic-affiliated hospitals and networks. The area has become a regional health care hub. The industry also includes nursing homes and long-term care facilities, physicians' offices, medical laboratories, etc.
Current Employment Levels and Major Employers	2011: 14,385 2006: 13,236 2001: 12,385 Major Employers: <ul style="list-style-type: none"> ▪ United Health Services ▪ Wilson Memorial and Binghamton General ▪ Lourdes Hospital ▪ United Health Services ▪ Willow Point Nursing Home ▪ Good Shepherd Fairview Home
Industry Trends/Outlook	The industry may be substantially impacted by reductions in fees/payments under the Affordable Care Act as well as significant investments in information technology and the way care is offered in the future.
State/Regional Strategic Industry	State: Not a strategic industry cluster Regional: Health Care 2020 Initiative
Local Potential	Moderate (following a period of relatively high growth)
Resource Assessment	Real Estate: The hospitals determine their own resource needs. A key planning/land use consideration is the long-term use of properties adjacent to existing facilities that would either allow or inhibit expansion in place. Labor: Health care providers work closely with local colleges and universities to provide training and meet workforce needs. (The medical community has made significant investments in the health sciences program at BCC, for example.) Some issues in recruiting doctors and medical specialists to upstate New York.



Target Industry: Education (K-12, College and University)	
Description:	Binghamton University has plans for expanded program offerings and additional student enrollments. This will have a significant impact on the local economy, both directly and by having additional students available for part-time work.
Criteria for Evaluation	Discussion
Historic Presence of Industry	Binghamton University was started as Harpur College in 1947 and Broome County Community College was founded in 1946. Both have continued to grow in enrollment, scope of programs and reputation for quality. They are vital resources to the regional economy.
Current Employment Levels and Major Employers	<p>Public education (for Binghamton MSA): 2011: 9,400 (local); 4,700 (state) 2006: 9,500 (local); 3,900 (state) 2001: 9,000 (local); 3,700 (state)</p> <p>Private-sector educational services (for Broome County): 2011: 520 2006: 546 2001: 648</p> <p>Major Employers:</p> <ul style="list-style-type: none"> ▪ Binghamton University ▪ Broome County Community College ▪ Public school districts (K-12) ▪ Broome-Tioga BOCES
Industry Trends/Outlook	There are plans to continue to expand programs and enrollment at Binghamton University with the backing of the SUNY system and state government. Broome Community College will expand as the market drives needs and opportunities.
State/Regional Strategic Industry	<p>State: Not a strategic industry cluster but an enabling resource</p> <p>Regional: Research portion of university to support growth in other segments</p>
Local Potential	Moderate to High
Resource Assessment	Binghamton University and Broome Community College are utilizing land on their existing campuses while looking to expand downtown for certain programs or functions. Broome County and the City of Binghamton should stay informed of plans to assure the proper support is in place to enable expansion while weighing the strategic value of having a not-for-profit (paying no local taxes) consume particular real estate assets.



Target Industry:	Manufacturing				
Description:	Diverse segment with strengths in specific areas as noted below.				
Criteria for Evaluation	Discussion				
Historic Presence of Industry	Manufacturing has been a strong base of the local economy from the earliest days of the Industrial Revolution due to local access to transportation, labor, raw materials and individuals with innovative ideas. The area has a long history in shoes with Endicott-Johnson, computers/electronics with IBM and GE (now BAE Systems), and simulation with Link Simulation.				
Current Employment Levels and Major Employers	Top Segments	2011	2006	2001	Major Employers
	Total Employment	9,678	12,282	16,487	
	Computer/Electronics	4,532	5,558	8,122	IBM, Lockheed Martin, BAE Systems, Endicott Interconnect, Endicott Research Group
	Fabricated Metal	1,148	1,162	1,524	Impress USA, Triple Cities Metal Finishing, Endicott Precision
	Machinery	692	941	1,426	Universal Instruments, Link Simulation/L3, Samscreen
	Food	847	1,029	1,127	Frito-Lay, Crowley Foods
	Electrical Equipment	795	983	1,003	Amphenol Interconnect Products
	Plastics/Rubber	347	409	543	National Pipe & Plastics
Industry Trends/Outlook	<p>Selected manufacturing segments can thrive in Broome County, but overall, high property taxes and utility costs, and New York's reputation for high taxes, will not put the area high on the list as a prime location for manufacturing. Electronics-related business derived from university research may thrive on the Huron Campus initially. If there is substantial expansion, the business will most likely relocate to a lower-cost location.</p> <p>Food processing is expanding rapidly in the state, leveraging the market demand for Greek-style yogurts and other products. Broome County has a potential play in this segment if it can offer low energy costs, reduced taxes, significant water and sewer capacity, and sites amenable to food processing. The County's limited sewer capacity could restrict its ability to attract food processing companies.</p> <p>Metal fabrication and machinery products are strong in Broome County and could potentially expand if the owners make overt choices to stay in the area rather than relocate to lower cost destinations.</p>				
State/Regional Strategic Industry	<p>State: Electronics/imaging, food processing, industrial machinery, materials processing and transportation equipment</p> <p>Regional: Advanced manufacturing in transportation-related equipment</p>				
Local Potential	Low to moderate				



Target Industry:	Manufacturing
Resource Assessment	<p>Real Estate: Lack of sites at a high level of readiness near interstates. Also a lack of contemporary industrial buildings with high ceilings (above 25 feet).</p> <p>Labor: Skilled and unskilled labor available, but challenges replacing older (retiring) workers and supporting incremental growth. Young people are not interested in manufacturing.</p> <p>Utilities: Some sites around the airport lack utilities; other sites have access to high cost power and limited sewer capacity.</p>

Target Industry:	Professional, Technical, and Business Services				
Description:	Legal, accounting, engineering, architecture, software, etc. for clients in the NY/PA area.				
Criteria for Evaluation	Discussion				
Historic Presence of Industry	Municipal governments, large manufacturers, educational institutions, health care providers, and other expanding businesses and organizations were major sources of demand for technical resources over the last 60+ years. Other services (legal, accounting and business consulting) were based in the Binghamton area to service the broader region.				
Current Employment Levels and Major Employers	Top Segments	2011	2006	2001	Major Employers
	Total Employment	3,180	3,754	3,666	
	Computer Systems Design	615	794	801	BlueStorm Technologies, Forward Business Solutions
	Architecture and Engineering	561	583	595	Delta Engineering, McFarland-Johnson, Innovation Associates
	Legal Services	543	620	642	Hinman Howard & Kattell LLP, Coughlin and Gerhart
	Accounting/Bookkeeping	341	555	396	Piaker & Lyons
	Management Consulting	129	199	202	Modern Marketing Concepts, Strategic Advantage Consulting
Industry Trends/Outlook	This sector took a hit with the national recession. Growth will be determined by overall business growth and economic activity (including large construction projects) within the service area. The development of high-tech businesses derived from R&D and shale gas activity may be sources of growth for legal, engineering, and other professional and technical services.				
State/Regional Strategic Industry	<p>State: Information technology services</p> <p>Regional: Not directly but technical support for other initiatives</p>				
Local Potential	Moderate (if the overall local economy grows).				
Resource Assessment	Real Estate: There is a good inventory of Class A & B space available in Broome County.				



Target Industry:	Professional, Technical, and Business Services
	<p>Labor: Labor is available locally, supported in part by engineering, accounting, and business programs at Binghamton University and other educational institutions. Some specialized talent must be recruited to the area. Recruitment can be an issue for workers from outside NYS or Boston due to high real estate tax rates and limited familiarity with “Greater Binghamton.”</p>

Target Industry:	Back Office and Customer Service Operations				
Description:	Derived primarily from financial services, credit/collections, IT support and support functions for other industries. The function is office or in some cases home based and covers a diverse skill base (accounting, IT, customer service, HR, legal, etc.).				
Criteria for Evaluation	Discussion				
Historic Presence of Industry	Broome County has had a limited number of stand-alone back-office and customer service operations. In the past, companies like Endicott-Johnson and IBM had back-office functions as part of their operations. More recently, NCI has utilized local talent for credit and collections, and announced plans to add 300 new customer-service jobs at its service center in Vestal.				
Current Employment Levels and Major Employers	Segment	2011	2006	2001	Major Employers
	Financial Services	2,588	3,203	3,515	Security Mutual Life Insurance, Columbian Mutual Life Insurance
	Administrative and Support Services	3,828	4,037	6,232	Nationwide Credit (NCI)
Industry Trends/Outlook	<p>Nationally, the financial services industry has taken a hit in the last few years; there has been a lot of consolidation and fewer back offices are being built. However, there may be opportunities for customer service and collections that serve a range of industries (e.g., utilities/telecom).</p> <p>Having access to Binghamton University with students that want to work part-time along with the overall availability and cost of labor in Broome County is a key selection factor.</p> <p>Some operations may co-locate a computer operation and require dual-sourced power (at a competitive cost) and dual-sourced telecom.</p>				
State/Regional Strategic Industry	<p>State: Back office operations are one of the state clusters</p> <p>Regional: Not directly but technical support for other initiatives</p>				
Local Potential	Moderate				
Resource Assessment	<p>Real Estate: There is available Class B office space in the 10,000 SF to 75,000 SF range</p> <p>Labor: Experienced customer-service talent and part-time student labor available.</p> <p>Utilities: Adequate; if there is a data center attached, the cost of power will be an issue unless the company locates on the Huron Campus.</p>				



Target Industry:		Wholesale/Warehousing/Distribution Centers and Related Transportation				
Description:		Broome County is a strategic location to serve the New York State market and adjacent New England. Northeastern Pennsylvania (Scranton and the Lehigh Valley) and the Mohawk Valley are key competitors.				
Criteria for Evaluation		Discussion				
Historic Presence of Industry		Binghamton has been a distribution center since the early days of rail transportation; this has been reinforced by the establishment of interstate access in multiple directions. Maines Paper & Food Service has been in the area for over 90 years.				
Current Employment Levels and Major Employers		Segment	2011	2006	2001	Major Employers Maines Paper & Food Service, Willow Run Foods, FedEx, TeamWorld
		Wholesale Trade	3,746	3,965	3,309	
		Transportation & Warehousing	1,464	1,724	2,452	
Industry Trends/Outlook		Segment relies heavily on overall economic growth (based on population and business growth) in the U.S. economy as well as within the region being served. The overall economy is slower than normal and the regional economy is also slow. If the state approves drilling of shale deposits for natural gas, it could increase this segment significantly.				
State/Regional Strategic Industry		State: Distribution is a strategic cluster Regional: These segments are not a regional priority				
Local Potential		Low to Moderate				
Resource Assessment		Real Estate: Either available distribution buildings (50,000 SF and larger that can easily be expanded) with high ceilings (30+ feet) and 40+ foot column spacing or parcels of 5 to 25 acres that are shovel ready and located within 1-2 miles of an interstate. Steep slopes may limit the county’s ability to compete for distribution sites, which typically require large expanses of flat land. Labor: Requires general laborers (e.g., freight movers, packers, office and stock clerks) and truck drivers as well as technicians for automated warehouse operations.				

Target Industry:		Data Centers
Description:	Due to the R&D in data center optimization at Binghamton University, it would be a prime opportunity to site a data center in Broome County. Will need low cost/dual feed power and fiber.	
Criteria for Evaluation	Discussion	
Historic Presence of Industry	IBM maintained data centers in the area (perhaps some of the original centers). There are currently several data centers in the Huron Campus with capacity for additional operations.	
Current Employment Levels	There is no specific employment in Broome County attributed to NAICS code 518	

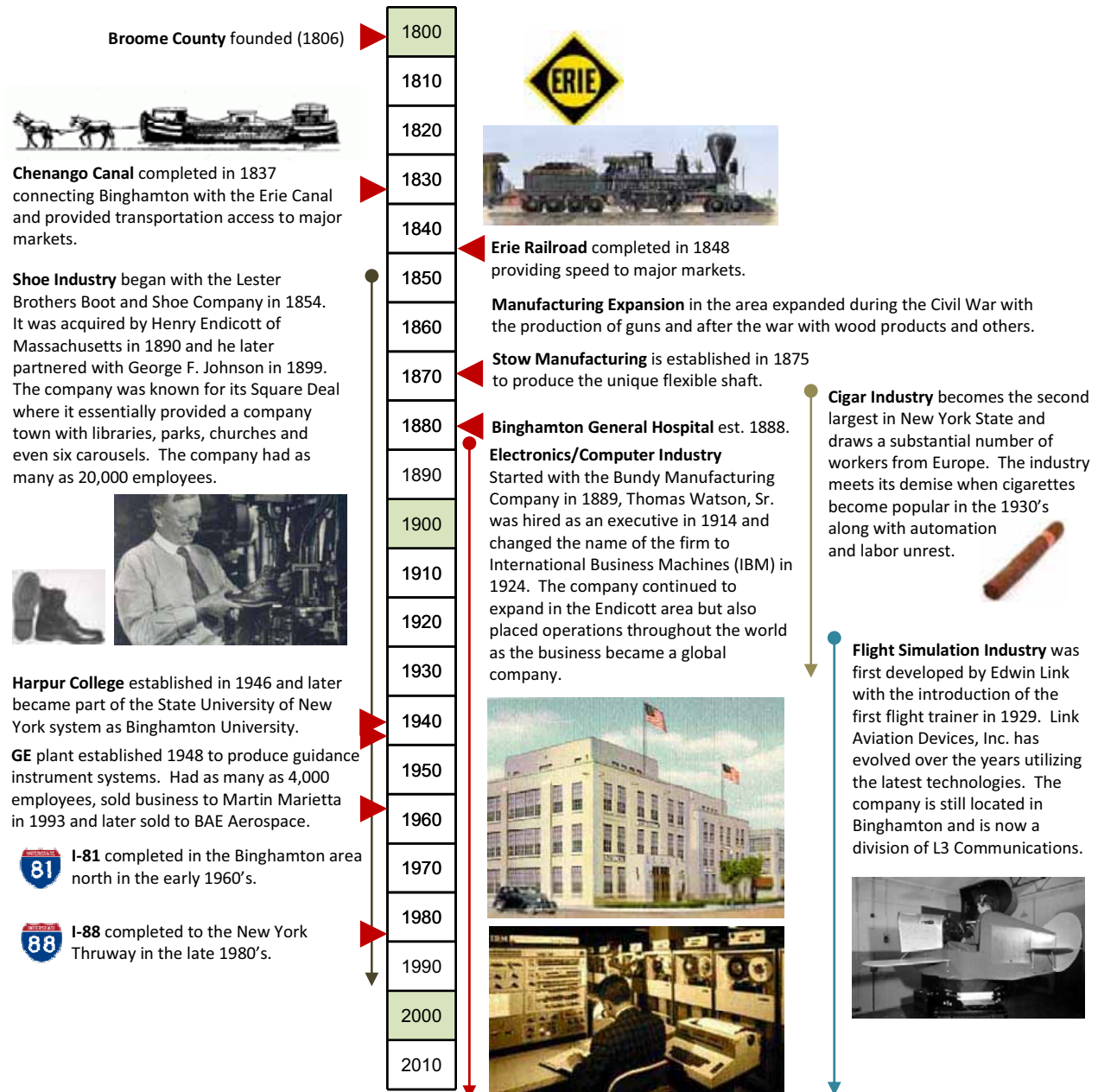


Target Industry: Data Centers	
and Major Employers	for data center operations. Most operations are typically part of a larger corporate, back office or R&D function.
Industry Trends/Outlook	The demand for digital data generation, management and retention continues to expand and processing speeds and storage capacities continue to be in need. Companies seek locations that help reduce the cost of operations while enhancing security.
State/Regional Strategic Industry	State: Not specifically targeted by the state Regional: Not specifically targeted by the region
Local Potential	Moderate. Will require significant marketing to build awareness of the Huron Campus as a potential site for data centers.
Resource Assessment	The Huron Campus has access to low cost power, telecom and available facilities. Research on energy efficient data center systems at Binghamton University may be a point of attraction for some businesses.



Historical Perspective on Local Economy

The economic history of Broome County is based on the vision of a handful of individuals over the years who produced innovative and market-competitive products underpinned by the area's access to transportation (originally canals, then the railroad, and eventually interstate highways). The area was also able to attract a workforce to support each industry though the development of communities that met the needs of workers



of different skills. Key industries have included shoes, cigars, wood products, computers and electronics, and aerospace products.



Current Industry Presence

Over the past 25 years, Broome County has become known as a university center as well as a regional health care hub. It has also had some growth in wholesale and distribution. The County has built on and retained its manufacturing roots, although overall employment levels have dwindled over the last several decades.

Table 1: Broome County Industry Strengths

Industry	Description
Health Care Services	Major regional health care service providers, long-term care facilities, and medical offices
Educational Services (Public Sector)	Major state university and a high quality community college
Wholesale/Distribution	Multiple companies that distribute food products, paper, plumbing supplies, commercial equipment, machinery, etc.
Finance and Insurance	Back office activity and local/regional sales offices
Professional and Technical Services	Regional firms that support multi-state activities within the Northeast
Manufacturing	<ul style="list-style-type: none"> The IBM heritage within the area has supported a very strong computer/electronics presence along with the services and products to support the industry. GE's original guidance systems business has expanded and changed hands, becoming Martin Marietta and then BAE Aerospace.

As shown in **Table 2**, location quotients for Broome County¹ indicate substantial strengths in computers and electronics as well as electrical equipment manufacturing. There is a significant presence of manufacturing overall as well as health care services. Employment in finance and insurance, professional and technical services, and company headquarters is relatively light.

Table 2: Location Quotients for Selected Industries in Broome County

NAICS Code	Industry	LQ
31-33	Manufacturing	1.28
311	Food Manufacturing	0.90
325	Plastics and Rubber Manufacturing	0.85
332	Fabricated Metal Product Manufacturing	1.32
333	Machinery Manufacturing	1.01
334	Computer and Electronic Product Manufacturing	6.35
335	Electrical Equipment and Appliance Manufacturing	3.38
42	Wholesale Trade	1.00
52	Finance and Insurance	0.73
54	Professional and Technical Services	0.60
55	Management of Companies and Enterprises	0.60
56	Administrative and Waste Services	0.80
62	Health Care and Social Assistance	1.40

Source: U.S. Bureau of Labor Statistics, QCEW, and E.M. Pemrick and Company.

¹ See Economic Profile for a full discussion of Location Quotients.



State Strategic Industries

The Empire State Development Corporation has identified 16 key industry clusters in New York State:

- Back Office & Outsourcing
- Biomedical
- Communications, Software & Media Services
- Distribution
- Electronics & Imaging
- Fashion, Apparel & Textiles
- Financial Services
- Food Processing
- Forest Products
- Front Office & Producer Services
- Industrial Machinery & Services
- Information Technology Services
- Materials Processing
- Miscellaneous Manufacturing
- Transportation Equipment
- Travel & Tourism

These are not defined as "target industries," but as industry clusters prevalent in many regions of the state. A key characteristic of these industry clusters is that they are export-oriented, selling products and services outside the regional market, generating income and employment. Top industry clusters in the Southern Tier with respect to employment, wages, and/or location quotients include Industrial Machinery & Services, Electronics & Imaging, Front Office & Producer Services, and Transportation Equipment.

New York State's economic strengths are primarily derived from agriculture, financial services, educational services, information (media), health care, and the manufacture of industrial equipment, selected electronics, and optics-related equipment. Goods produced in the state are typically high value to overcome the high cost of taxes and energy.

The State of New York has established regional *Centers of Excellence* at leading universities to support high technology ventures and encourage the commercialization of scientific breakthroughs. The Centers use a collaborative approach involving the public and private sectors. A listing of the Centers of Excellence is provided in **Table 3** below.



Table 3: New York State Centers of Excellence

Center	Location
Small Scale Systems Integration and Packaging (S3IP)	Binghamton
Bioinformatics & Life Sciences	Buffalo
Infotonics (Photonics and Micro Systems)	Rochester
Nanoelectronics	Albany
Environmental Systems (Renewable Energy and Indoor Environments)	Syracuse
Information Technology	Long Island

Located at Binghamton University, the Small Scale Systems Integration and Packaging (S3IP) Center is a research and development organization that addresses challenges in small scale system design, process development, prototyping, and manufacturing for academia and the microelectronics industry. Current research areas include:



- Small Scale Systems Integration and Packaging;
- Materials and Sensors;
- Flexible Electronics;
- Analytical and Experimental Models;
- Flexible, Large Area Autonomous Solar Power; and
- Energy-Smart Electronic Materials.

These research areas have been selected for their technical importance to the field, and their demand for interdisciplinary research in fundamental engineering, physical and life sciences. Each theme also provides opportunities for meaningful industrial partnerships, has the potential for societal impact and innovation, and will attract developing engineers and scientists to the field. The activities at this Center of Excellence can also be integrated with outcomes from the other Centers of Excellence to deliver an ultimate solution/product. This strengthens Broome County from an access to technology perspective.



Regional Strategic Industries

The Strategic Economic Development Plan developed by the Southern Tier Regional Economic Development Council in 2011 identifies four "principal growth sectors and industry clusters [that] have the potential to drive the economy and leverage its core strengths." These are shown in **Table 4**.

Table 4: Southern Tier Growth Sectors	
Industry	Description
Renewable Energy	<ul style="list-style-type: none"> Includes wind, biomass, solar, and natural gas. Productization [sic] of energy technologies and energy efficiency activities that reduce costs
Advanced Manufacturing	<ul style="list-style-type: none"> Next-generation transportation development based on regional expertise in avionics/vehtronics, simulation, logistics, hybrid transportation power development, etc.
Agriculture	<ul style="list-style-type: none"> Sustainable agriculture and forestry
Health Care	<ul style="list-style-type: none"> Focus on increasing rural access, strengthening the industry through technology development and university-industry collaboration, and workforce development

The vision for the Southern Tier is aimed at capitalizing on the region's assets and looking forward towards the future: "Building on a strong foundation of existing businesses and higher education institutions the Southern Tier region uses a collaborative approach to leverage its globally competitive advantages to attract talent and investment for the development of industry clusters. Our focus will be on increasing the size and prosperity of the region's workforce through new business creation based on high-technology discoveries and other entrepreneurship activities, while ensuring healthy communities and protecting the natural beauty and resources of the region."

The plan contains five major strategic objectives, four of which focus on the industry clusters identified above.

Strategy 1: Leader in Energy Efficiency & Renewable Energy Technology

Objective: Optimize use of the region's abundant natural resources, research and technology transfer, academic and business innovation and training programs to build a thriving energy sector for the benefit of residents, institutions, businesses and major industrial centers.

Strategy 2: Transportation Industry ... The Next Generation Technology and Advanced Manufacturing

Objective: Build the region's existing transportation industry into a global leader and technological hub for next generation transportation development.

Strategy 3: Health Care 2020

Objective: Develop and expand the use of sophisticated diagnostic tools and care methods, together with training of health care providers and technical personnel, to strengthen the healthcare industry while creating a healthier population and workforce region-wide.



Strategy 4: Revitalize the Rural Farm and Forest-Based Economy

Objective: Expand and increase the sustainability of agricultural and forestry ventures through product development and promotion, business infrastructure development and utilization of new technology.

Trends and Factors That Impact Economic Activity

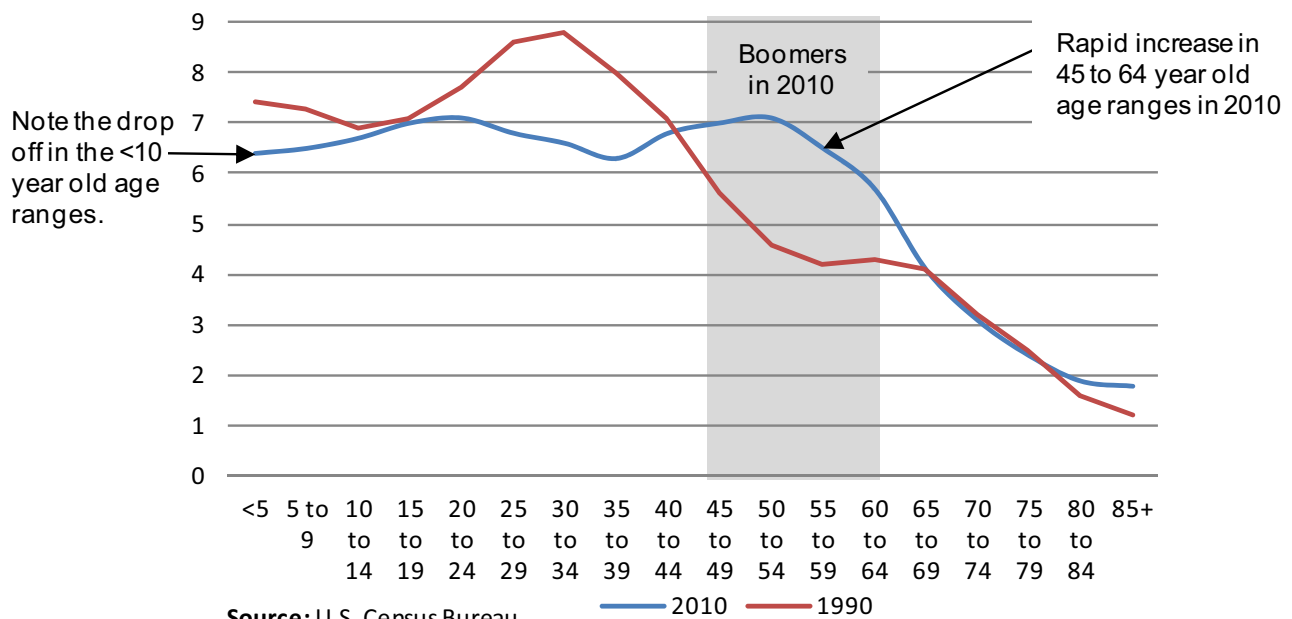
As a means of both verifying and identifying market opportunities for target industries, specific industries and technologies were studied in depth.

Health Care Industry Dynamics

The health care industry is undergoing some significant changes. These are derived from a confluence of an aging population that requires more care, changes in technology, and the escalating cost of delivering health care services utilizing traditional approaches.

Demographic Shifts - World War II and the Depression impacted birth rates and the rapid economic expansion after WWII of the baby boomers who are now reaching retirement. Also note the lower birth rate with young adults having fewer children, none at all or later in life compared to the baby boomers. The result is a rapid expansion of the population entering retirement and older age that impacts both the labor force and the number of potential Medicare patients.

Comparison of Age Ranges and The Impact of Baby Boomers in the U.S. (1990 vs. 2010)





Computer-Based Records and Direct Data Entry - An important advance in cutting health care costs is the use of electronic records. Electronic records have the potential not only to improve efficiency but also to enhance the quality of care through better communication. The management of these systems will require additional IT staff and large data centers to retain records. Health information technology systems will require substantial up-front costs, but are expected to bring a significant return over time.

The federal Affordable Care Act (discussed further below) is supportive of investments in health IT to encourage the use of digital medical records. The Act also provides funding for training in fields such as health informatics² to address specific health care workforce needs.

New Remote Diagnostic Technology - Integrating both sensor and cell phone technology, doctors can remotely evaluate a patient's heart rate and other conditions. This means that patients located in rural communities can still receive quality care and assessment.

Affordable Care Act - The federal Affordable Care Act (ACA) is expected to have significant impacts on the health care industry as provisions aimed at cost containment begin to take effect.

Among the most important provisions of the ACA is a focus on preventive care and a shift from the current "fee for services" model to a patient-centered approach that aims to reduce unnecessary hospital admissions and rewards health care providers for quality and efficiency. In central New York, for example, the adoption of the "medical home" concept by Bassett Healthcare Network is changing the way services are delivered at its 23 primary care centers. Under Bassett's program, general and family practitioners lead teams of nurses, medical specialists, and even front-office staff to plan and coordinate patient care. In addition, electronic medical records are centralized, allowing physicians to check and follow up on patients' referrals to specialists.³

Experts disagree on how the ACA will impact employment in the health care industry. An analysis by researchers at the Urban Institute, for example, asserts that the ACA is "unlikely to have major aggregate effects," because positive and negative impacts will offset each other: while the expansion of coverage and increased federal spending on health care will probably *increase* the demand for labor, "including increasing use of medical equipment, new technologies and pharmaceuticals" in the health care sector, spending reductions in Medicare and other government programs will have the opposite effect.⁴

The law also places a 2.5% tax on the revenues of medical device and pharmaceutical manufacturers. This could impact the growth and development of the industry, particularly among smaller/emerging companies that have very thin margins. It could also drive up the costs of drugs and medical devices.

The Future of Health Care?

A recent article in *Modern Healthcare*, a trade publication, questions whether the significant job growth in the health care sector is sustainable – especially in older cities with slow-growing or declining populations.

² Health informatics is a discipline at the intersection of health care, computer science, and information science.

³ "Bassett's 'Medical Home' System Scores High Marks," *The (Oneonta) Daily Star*, April 26, 2013.

⁴ John Holahan and Bowen Garrett, "How Will the Affordable Care Act Affect Jobs?" The Urban Institute, March 2011.

Accessed at www.urban.org/UploadedPDF/412319-Affordable-Care-Act-Affect-Jobs.pdf.



Cities like Detroit, which have lost thousands of manufacturing jobs over the last several decades, tend to view health care as a catalyst for economic growth; it provides stable employment and relatively high-paying jobs. As the article notes, these cities “could be vulnerable could be vulnerable to sharp job reversals as Medicare, Medicaid and private insurers escalate their efforts to ratchet down costs.” Other analysts are not so sure, pointing out that higher median ages and poverty in economically stressed communities continue to drive rising demand for health care services. With no clear picture emerging, hospital executives are being cautious about hiring, focusing on making processes more efficient while they evaluate whether to add labor.⁵

Another article in *Modern Healthcare* notes that the ACA and “the shifting economics of medicine” are already impacting how medical students are trained. Many solo practitioners have gone to larger group practices, driven by increasing costs and declining insurance reimbursements. In addition, hospitals have been purchasing private practices to bolster declining revenue from in-patient stays; hospitals now employ about 20% of U.S. physicians. With teamwork at a premium under the ACA, medical students are learning how to work effectively with other professionals, whether they are doctors, nurses, nurse-practitioners, social workers, or home health aides. Many universities have established new programs: joint degrees in public health, business, and public administration; MD-MBA programs; and masters-level programs in health care management.⁶

Locally, Binghamton University’s Decker School of Nursing recently established a doctoral program focused on providing health care in rural communities, and its School of Management has created an Executive MBA program with a health care concentration that allows people with clinical backgrounds to enhance their managerial skills. Broome Community College, which has many programs in the health sciences, also offers a Health Information Technology degree, preparing graduates for the increasing number of IT jobs driven by the use of electronic medical records.

All considered, although the health care industry has undergone substantial growth both locally and nationally over the past 20 years, continued growth at the same pace is not necessarily a given. Employment may actually be reduced as practices consolidate and data entry positions are replaced with fewer but higher level IT jobs.

⁵ “On the Bubble? With Healthcare Job Growth Outstripping Population in Aging Rust Belt Cities, Some Question the Trend's Durability,” *Modern Healthcare*, March 2, 2013.

⁶ “Obamacare Transforms Med School,” *Modern Healthcare*, February 4, 2013.

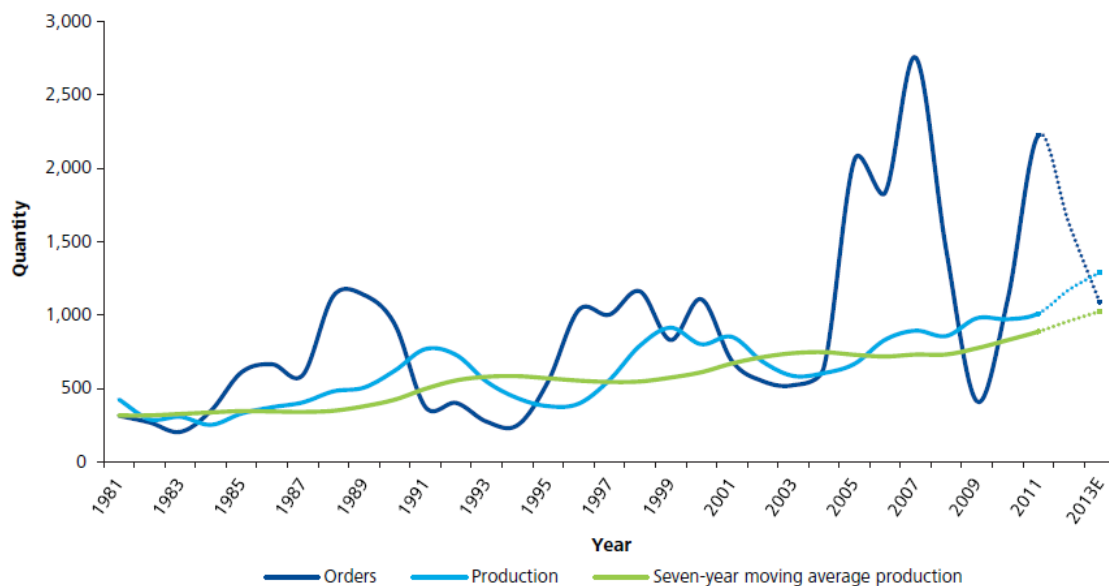


Commercial and Military Aerospace Markets

Several of Broome County's major employers rely on commercial and military aerospace markets to sustain them. The information below examines the current state of these markets.

According to a recent report by Deloitte Touche Tohmatsu LLC, orders for military-related projects have seen a three-year decline primarily due to decreased spending by the U.S. and European countries. In contrast, orders for commercial aircraft hit record levels in 2012 and are projected to do so again in 2013. Aircraft production in 2013 may hit 1,000 aircraft on a world-wide basis.

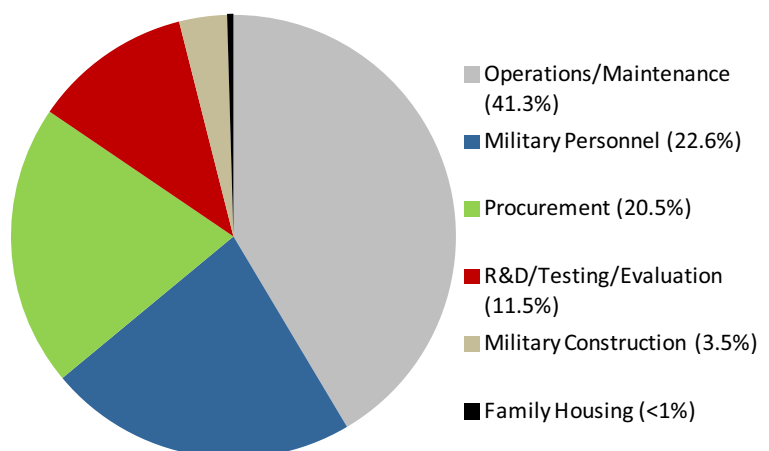
Historic and Projected Orders vs. Production for Global Commercial Aircraft



The globalization of production (components and final assembly) is occurring as emerging countries like China are seeing an increased demand for air travel that is driving interest in production of aircraft. There will be pressure to keep production in the "home" country but also to have some presence in countries placing the orders to comply with purchasing requirements and reduce costs.

The U.S. military spending in 2011 was over \$710 billion which was 41% of the global military spending, followed by China at \$142.9 billion, Russia at \$71.9 billion and France/UK at \$63 billion. U.S. military spending by category is shown at right.

Military Spending by Category





Data Centers

The accumulation, storage and retrieval of information continues to expand at an exponential rate, driving an increased demand for data centers. Industries that will have a definite need for substantial growth in data centers will be finance and insurance, health care and retail. The demand for additional capacity is further enhanced by the trend of cloud computing – a technique of accessing information from anywhere via the Internet.

There are different types of data center ownership and operational arrangements that support the needs of customers with various requirements:

- A dedicated data center at a company headquarters, back office or R&D center.
- A dedicated/remote data center that has one user but is located away from other operations. This may be company or third party operated.
- A co-located/third-party operated data center. As the cost of operations and constant replacement of equipment escalates, companies look for creative alternatives to owning and operated data centers themselves.

Data centers are also classified by levels of reliability and availability (defined as “tiers”) that determine facility design features and utility requirements. The four tier levels are outlined in **Table 5** below.

Table 5: Data Center Requirements	
Tier Level	Requirements
1	<ul style="list-style-type: none"> ▪ Single non-redundant distribution path serving the IT equipment ▪ Non-redundant capacity components ▪ Basic site infrastructure with expected availability of 99.671% uptime
2	<ul style="list-style-type: none"> ▪ Meets or exceeds all Tier 1 requirements ▪ Redundant site infrastructure capacity components with expected availability of 99.741% uptime
3	<ul style="list-style-type: none"> ▪ Meets or exceeds all Tier 1 and Tier 2 requirements ▪ Multiple independent distribution paths serving the IT equipment ▪ All IT equipment must be dual-powered and fully compatible with the topology of a site's architecture ▪ Concurrently maintainable site infrastructure with expected availability of 99.982% uptime
4	<ul style="list-style-type: none"> ▪ Meets or exceeds all Tier 1, Tier 2 and Tier 3 requirements ▪ All cooling equipment is independently dual-powered, including chillers and heating, ventilating and air-conditioning (HVAC) systems ▪ Fault-tolerant site infrastructure with electrical power storage and distribution facilities with expected availability of 99.995% uptime



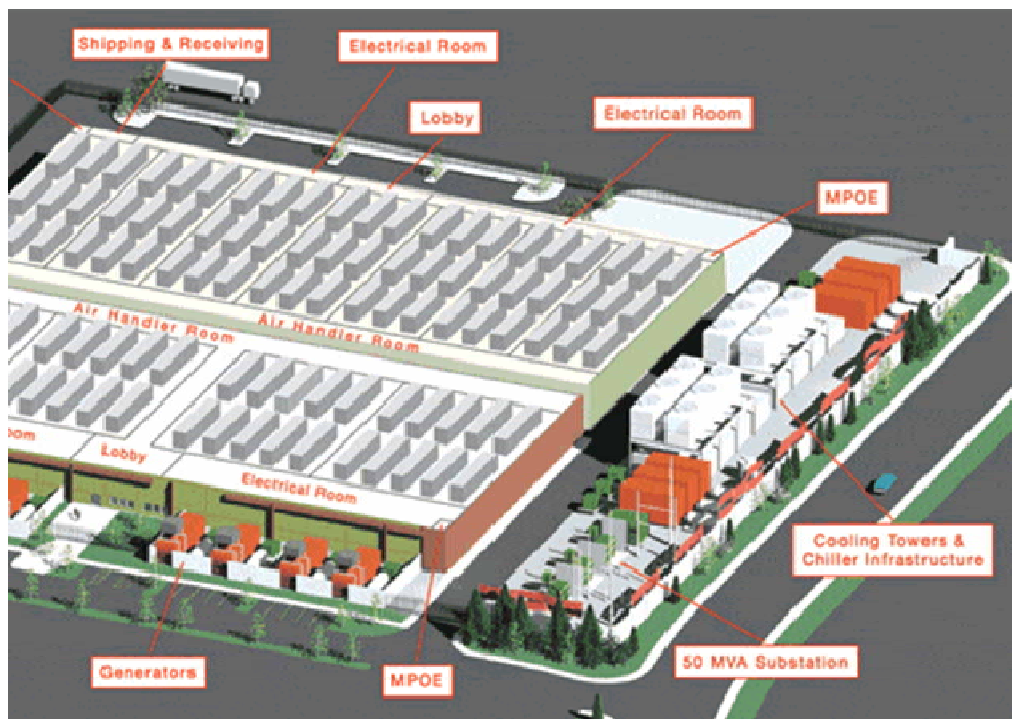
The operation of a data center exists between the tension of two key drivers: efficiency (cost) and reliability from a perspective of 99.99+ % uptime and the swings in capacity (depending on the use and access). The operating challenges are different from a fairly predictable and controllable inhouse center vs. a Google center that gets hit with a web site that goes viral.

Selecting a site for a data center requires an evaluation of specific criteria that maximize performance while minimizing risks. Key parameters include:

- Low incidence of natural disasters from tornados, floods, earthquakes, hurricanes, etc.
- Adequate capacity and high reliability and low cost of telecom and electric power sources. There is a new strategy to address electric power issues by installing a stand-alone power source that can utilize natural gas or another highly reliable energy source to generate electricity.
- A site that does not have a lot of exposure to traffic and the public – i.e., not a high-visibility location.
- Access to IT, operations, and maintenance talent to support the facility.

The physical size of the facility can vary and the amount of buffer and expansion land that a prospective company requires varies by application. The land requirements may range from 5 to 50 acres and should be in a location that has clean ambient air.

Large Scale Traditional Data Center Complex





Food Processing

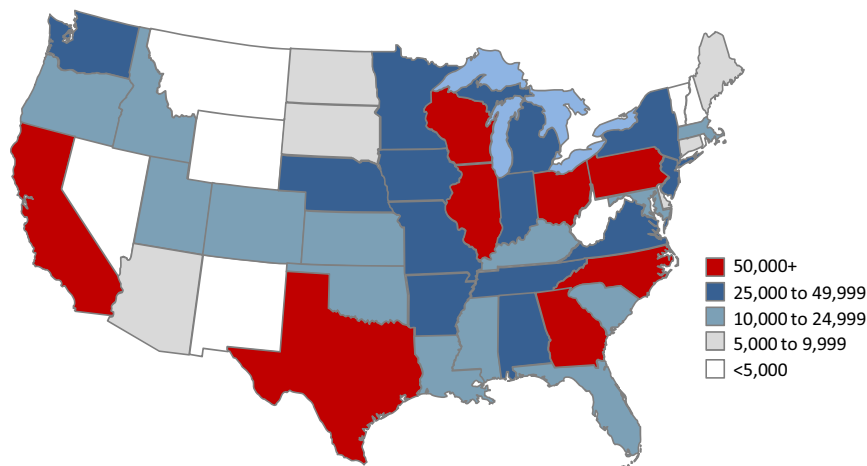
New York State is in the top ten food processing states with a fairly broad industry presence. Companies locate in the state for two primary reasons: 1) to gain access to bulk milk and field crops, and 2) to be in close proximity to major markets (e.g., the New York City metro area and New England). Currently, the fastest growing economic segment in the state is dairy, with rising demand resulting in rapid expansion of yogurt production. Broome County could support additional food production facilities.

Top Ten Food Production States										
Segment	CA	TX	IL	PA	WI	GA	NC	OH	NY	IA
Animal/Pet Food	C	D	E	D	E	E	E	E	E	D
Grain/Milling	D	E	C	E		E	E	E	E	C
Sugar/Confectionary	C	D	C	C	E	E		E	E	
Fruits/Vegetables	A	C	C	C	C		E	B	C	E
Dairy	B	C	D	C	B	E	E	C	C	D
Meat/Seafood	B	A	B	B	B	A	A	C	D	A
Baked Goods	D	B	B	B	D	B	C	B	B	E
Other Foods	A	C	B	B	C	C	D	C	C	D
Beverages	A	C	B	B	C	C	D	C	C	D

New York's food production industry employment has been just below 50,000 and in 2013 may exceed that level.

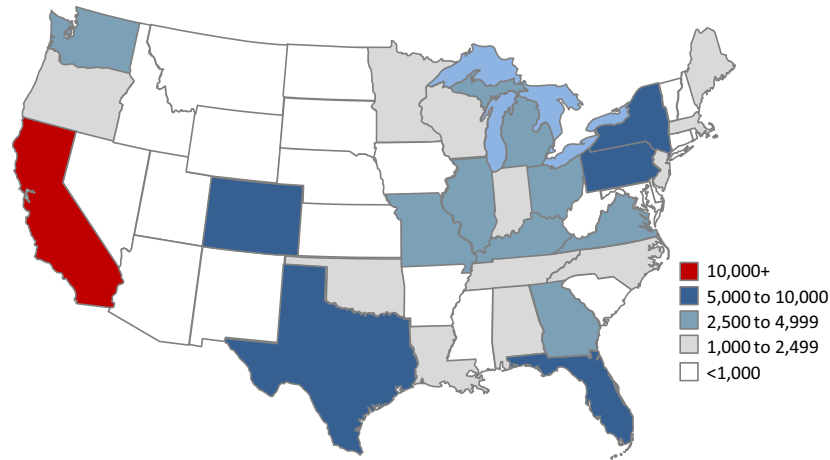
A	25,000+
B	10,000 – 24,999
C	5,000 – 9,999
D	2,500 – 4,999
E	1,000 – 2,499

Food Processing Employment by State



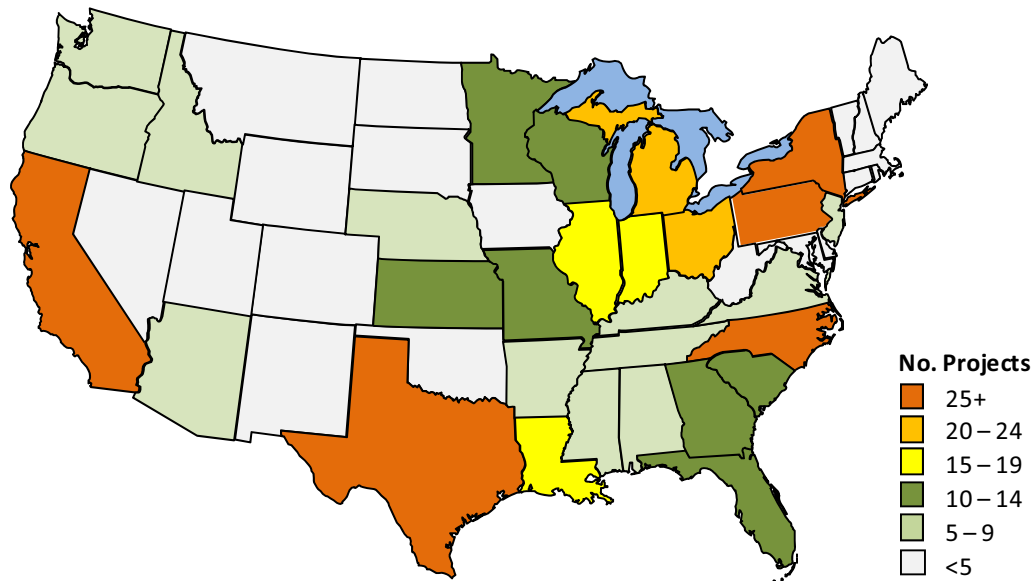


Beverage Processing Employment by State



Based on industry data, between 2007 and 2011, there were over 550 major project announcements in the U.S. food and beverage industry, of which 84% were manufacturing related. These included four manufacturing projects in Genesee County and one each in the counties of Chenango, Chemung, Monroe, Onondaga, and Oswego. New York ranks third in food industry headquarters, so the state has access to top-ranked companies within the industry.

Food and Beverage Manufacturing Projects by State: 2007-2011



For Broome County, the challenge will be whether it can offer clean uncontaminated or greenfield sites with interstate access and substantial water and sewer capacity. Food processing facilities also need to be located well away from residential neighborhoods due to the odors involved, and away from companies that generate potential contaminants (e.g., cement plants, metal processing facilities).



Table 6 below shows various segments of the food and beverage industry and their national growth potential. The top growth segments in New York State include dairy, baked goods, and prepared foods and beverages.

Table 6: Food Segments and Growth Potential		
Segment	Growth Potential	Comments
Pet Food	Low to Moderate	Over the next three years, projections are 2-3% per year vs. 5%, the growth rate sustained over the last decade. Growth in the pet population is beginning to stabilize.
Grain Milling/Cereal	Low to Moderate	Pressed oils and grains for cereal substitutes (breakfast bars and snack foods) have highest growth potential.
Sugar/Confectionary	Moderate	America has a “sweet tooth” that will not disappear quickly.
Fruits/Vegetables	Moderate	With new processes and packaging to enhance taste and flavors along with the understanding of their nutritional value, the demand for fruits and vegetables should continue to grow.
Fruits	Moderate	
Vegetables	Moderate	
Dairy Products		<ul style="list-style-type: none"> ▪ Demand for milk is mainly for dairy products. ▪ Cheese demand continues to climb. ▪ Yogurt is climbing fast and has not yet hit a saturation point.
Milk	Decreasing	
Cheese	Moderate	
Yogurt	High	
Fresh Meats/Fish		<ul style="list-style-type: none"> ▪ Fresh beef (“red meat”) has been on a slight downward trend. ▪ Pork needs “rediscovery” to build demand. ▪ Chicken has steady growth with no saturation point in sight. ▪ Demand for salmon is strong but is tempered by price.
Beef	Decreasing	
Pork	Steady	
Chicken	Moderate to High	
Fish/Salmon	Moderate	
Baked Goods	Moderate	Specialty breads (gluten free), unique crackers and cupcakes have a moderate growth potential. Sandwich shops (like Panera Bread) are helping to introduce new breads.
Snack Foods	Moderate to High	This market has expanded rapidly beyond the traditional chips, pop corn and pretzels to energy bars and other nutrition/performance based offerings.
Prepared Foods	Moderate to High	This is the most dynamic segment in the industry with new concepts constantly coming on the market. There is both high growth and high volatility. New meals with meat (beef, pork, chicken and fish) or non-meat entrees that have great taste and favorable nutrition are gaining momentum.



Table 6: Food Segments and Growth Potential

Beverages		
Tea	Moderate	<ul style="list-style-type: none"> Green and specialty teas are in demand.
Coffee	Low to Moderate	<ul style="list-style-type: none"> Home brewed and take-out coffees have their niches.
Soft Drinks	Decreasing	
Bottled Water	Moderate to High	<ul style="list-style-type: none"> Recent high growth but saturation point is in sight.
Fruit Juices	Low	<ul style="list-style-type: none"> High cost... companies are promoting the health benefits.
Sports Drinks	Moderate	<ul style="list-style-type: none"> Market is beginning to mature.
Other Drinks	High	<ul style="list-style-type: none"> High potential; heavy caffeine energy drinks getting push-back.
Beer	Moderate	<ul style="list-style-type: none"> Overall consumption down but craft brew market is expanding.
Wine	Moderate	<ul style="list-style-type: none"> Local/regional wines are expanding.
Distilled Spirits	Low	<ul style="list-style-type: none"> Trying to expand into mixed drinks.



Distribution

Distribution and logistics are all about location vs. cost, time of travel and backhaul utilization when possible. Broome County is a logical choice for facilities to serve upstate New York and portions of New England. One consideration is that for the most part, upstate New York and New England are not high population growth areas, so the national emphasis on the region is not as strong as other areas in the southern and western U.S. Primary opportunities may come from the distribution of food and household goods.

Target and WalMart have already selected the Mohawk Valley as a destination for their distribution centers to serve upstate New York and New England. The Broome County area allows products coming from the Midwest to reach the New York City metropolitan area without having to travel through congested roadways in New Jersey.

Pennsylvania's Lehigh Valley has become one of the largest areas on the east coast for the location of warehouses and distribution centers. In 2012, state economic development officials announced two distribution projects in the region: an 870,000 square foot PetSmart facility and a 909,919 square foot Dollar General facility. The companies are building their regional distribution centers on a combined 197 acres in a fully-approved, pre-permitted industrial park near the intersection of Interstates 78 and 81.

From the Allentown, Pennsylvania area, products can come from the south and Midwest for transport to New York City through New Jersey, to upstate New York via I-81 or I-95 and to New England on I-81 and then I-84.





Other R&D and Technology Support Activities in the Region

Center for Energy-Smart Electronic Systems (ES2) - The Center for Energy-Smart Electronic Systems, a National Science Foundation Industry/University Cooperative Research Center (I/UCRC), works in partnership with government, industry and academia to develop systematic methodologies for efficiently operating electronic systems, including data centers, by controlling resources and managing workloads to achieve optimal energy consumption.



Binghamton University has amassed a vast infrastructure for conducting energy efficient systems research by academic and industrial partners. Growth in this area will be enabled by a new \$30 million building, opening in 2013. This building will have a 6,000 square foot data center laboratory with different types of cooling facilities, supplemental solar power and an in-ground water battery. A 4,000 square foot fully instrumented data center lab, supported in part by a NSF MRI award, is currently available for use by the center. This facility is equipped with 24 racks of IBM and Dell servers and will eventually be relocated to the new building.

Technical expertise and infrastructure at the Integrated Electronics Engineering Center (IEEC) and Analytical and Diagnostics Laboratory (ADL) are maintained by Ph.D. level professional staff. Electronics packaging facilities at the (IEEC), a New York State Center of Advanced Technology, include an on-site demonstration facility that allows for rigorous and replicable testing of new technologies. Laboratories are equipped for analyzing electronics packaging technology products and are useful for performing physical, chemical, surface and electronic analysis of products and materials.



Cornell University Food Processing and Development Laboratory – Further investments are being made in this lab that supports the development of optimum food processes for a variety of products. The FPDL currently has, or is developing, research and development or technical assistance projects for the following Southern Tier companies: Chobani Yogurt (Chenango), HP Hood (Steuben), Fingerlakes Farmstead Cheese (Schuyler), Indian Milk and Honey (Tompkins), Agave Biosystems (Tompkins), E2E Materials (Tompkins), International Food Network (Tompkins).



Alliance of Manufacturing & Technology – This organization is comprised of consultants and trainers who work with manufacturers and technology companies to help them succeed and remain, grow, and prosper in the Southern Tier. It is a resource that can help small and emerging technology companies achieve success in the local economy. It uses a comprehensive approach to facilitate significant operational improvements.



Labor Requirements

The tables below list the top occupations in each of the target industries with relevant education and training requirements. Additional information on the existing and potential Broome County labor force is provided in the Workforce Profile.

Source for all tables: Staffing Patterns, Occupational Employment by Industry, New York State, unless otherwise noted. Education and training requirements from the U.S. Bureau of Labor Statistics.

Health Care Services				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Registered Nurses	10.4%	Associate's degree	None	None
Home Health Aides	8.2%	Less than HS	None	Short-term OJT
Personal Care Aides	7.9%	Less than HS	None	Short-term OJT
Nursing Aides and Orderlies	6.4%	Postsecondary cert.	None	None
Receptionists and Information Clerks	3.1%	HS diploma	None	Short-term OJT
Secretaries and Administrative Assts.	3.0%	HS diploma	None	Short-term OJT
Physicians and Surgeons, All Other	3.0%	Doctoral or professional degree	None	Internship/residency
Licensed Practical Nurses	2.9%	Postsecondary cert.	None	None
General Office Clerks	2.1%	HS diploma	None	Short-term OJT
Office Supervisors	1.8%	HS diploma	1-5 years	None

Educational Services				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Postsecondary Teachers	12.7%	Doctoral or professional degree	None	None
Elementary School Teachers (excl. Special Education)	10.7%	Bachelor's degree	None	Internship
Secondary School Teachers	8.2%	Bachelor's degree	None	Internship
Teacher Assistants	7.8%	HS diploma	None	Short-term OJT
Other Teachers and Instructors	5.9%	N/A	N/A	N/A
Middle School Teachers (excl. Special and Career/Technical Education)	4.7%	Bachelor's degree	None	Internship



Broome County Comprehensive Plan

Building our Future

Janitors and Cleaners	3.4%	Less than HS	None	Short-term OJT
Special Education Teachers	3.3%	Bachelor's degree	None	Internship
General Office Clerks	2.9%	HS diploma	None	Short-term OJT
Secretaries and Administrative Assts.	2.8%	HS diploma	None	Short-term OJT

Source: Industry-Occupation Matrix Data for "Educational services: state, local, and private," U.S. Bureau of Labor Statistics.

Manufacturing				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Manufacturing (General)				
Team Assemblers	5.3%	HS diploma	None	Moderate-term OJT
Production Supervisors	3.3%	Postsecondary cert.	1-5 years	None
Inspectors and Testers	2.8%	HS diploma	None	Moderate-term OJT
Sales Representatives, Wholesale/Mfg., Non-Tech	2.7%	HS diploma	None	Moderate-term OJT
Electrical and Electronic Equipment Assemblers	2.5%	HS diploma	None	Short-term OJT
Machinists	2.3%	HS diploma	None	Long-term OJT
Packaging and Filling Machine Operators	2.3%	HS diploma	None	Moderate-term OJT
General and Operations Managers	2.0%	Associate's degree	1-5 years	None
Mixing & Blending Machine Setters, Operators	1.9%	HS diploma	None	Moderate-term OJT
Packers and Packagers, Hand	1.8%	Less than HS	None	Short-term OJT
Other top occupations - Computer & Electronics				
Electrical and Electronic Engineering Technicians	5.3%	Associate's degree	None	None
Software Developers, Systems Software	4.8%	Bachelor's degree	None	None
Electrical Engineers	4.6%	Bachelor's degree	None	None
Computer Hardware Engineers	3.8%	Bachelor's degree	None	None
Inspectors and Testers	2.8%	HS diploma	None	Moderate-term OJT
Accountants and Auditors	2.7%	Bachelor's degree	None	None
Industrial Engineers	2.4%	Bachelor's degree	None	None
Other top occupations - Fabricated Metal Products				
Welders, Cutters, Solderers	5.2%	HS diploma	<1 year	Moderate-term OJT
Computer-Controlled Machine Tool Operators	4.1%	HS diploma	None	Moderate-term OJT
Cutting, Punching, and Press Machine Setters	3.5%	HS diploma	None	Moderate-term OJT
Structural Metal Fabricators and Fitters	2.9%	HS diploma	None	Moderate-term OJT
Sheet Metal Workers	2.7%	HS diploma	None	Apprenticeship
Other top occupations - Machinery				
Mechanical Engineers	3.8%	Bachelor's degree	None	None
Welders, Cutters, Solderers	2.6%	HS diploma	<1 year	Moderate-term OJT



Manufacturing				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Engine and Other Machine Assemblers	2.4%	HS diploma	None	Short-term OJT
Shipping and Receiving Clerks	2.0%	HS diploma	None	Short-term OJT
Grinding/Polishing Machine Tool Operators	2.0%	HS diploma	None	Moderate-term OJT
Other top occupations - Food Products				
Bakers	8.6%	Less than HS	None	Long-term OJT
Food Batchmakers	7.2%	HS diploma	<1 year	Short-term OJT
Counter Attendants, Cafeteria Or Food Concession	3.2%	Less than HS	None	Short-term OJT
Cashiers	2.6%	Less than HS	None	Short-term OJT
Food Cooking Machine Operators and Tenders	2.6%	HS diploma	<1 year	Short-term OJT
Industrial Truck and Tractor Operators	2.5%	Less than HS	<1 year	Short-term OJT
Other top occupations - Electrical Equipment				
Computer-Controlled Machine Tool Operators	3.8%	HS diploma	None	Moderate-term OJT
Electromechanical Equipment Assemblers	2.5%	HS diploma	None	Short-term OJT
Electrical and Electronic Engineering Technicians	2.4%	Associate's degree	None	None
Electrical Engineers	2.1%	Bachelor's degree	None	None

Professional & Technical Services				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Professional & Technical Services (General)				
Lawyers	8.0%	Doctoral or professional degree	None	None
Accountants and Auditors	5.6%	Bachelor's degree	None	None
Secretaries and Administrative Assts.	3.7%	HS diploma	None	Short-term OJT
General Office Clerks	3.7%	HS diploma	None	Short-term OJT
Legal Secretaries	3.1%	HS diploma	None	Moderate OJT
Paralegals and Legal Assistants	3.1%	Associate's degree	None	None
Bookkeeping, Accounting, and Auditing Clerks	2.9%	HS diploma	None	Moderate OJT
Management Analysts	2.6%	Bachelor's degree	1-5 years	None
Computer Programmers	2.2%	Bachelor's degree	None	None
General and Operations Managers	2.1%	Associate's degree	1-5 years	None



Back-Office/Customer Service Operations

Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Bill and Account Collectors	17.1%	HS diploma	None	Moderate-term OJT
Customer Service Representatives	13.5%	HS diploma	None	Short-term OJT
Telemarketers	12.4%	Less than HS	None	Short-term OJT
Office Machine Operators, Except Computers	5.2%	HS diploma	None	Short-term OJT
General Office Clerks	4.8%	HS diploma	None	Short-term OJT
Office Supervisors	4.0%	HS diploma	1-5 years	None
Mail Clerks, Except Postal Service	3.7%	HS diploma	None	Short-term OJT
Switchboard Operators	2.6%	HS diploma	None	Short-term OJT
Medical Transcriptionists	2.6%	Postsecondary cert.	None	None
Sales Representatives, Services, All Other	2.0%	HS diploma	None	Short-term OJT

Wholesale/Warehousing/Distribution

Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
Wholesale Trade				
Sales Representatives, Wholesale/Mfg., Non-Tech	21.0%	HS diploma	None	Moderate-term OJT
Laborers and Freight Movers	5.6%	Less than HS	None	Short-term OJT
General Office Clerks	3.9%	HS diploma	None	Short-term OJT
Shipping and Receiving Clerks	3.9%	HS diploma	None	Short-term OJT
Customer Service Representatives	3.8%	HS diploma	None	Short-term OJT
Bookkeeping, Accounting, and Auditing Clerks	3.4%	HS diploma	None	Moderate-term OJT
Stock Clerks and Order Fillers	3.0%	Less than HS	None	Short-term OJT
Heavy/Tractor-Trailer Truck Drivers	2.8%	HS diploma	1-5 years	Short-term OJT
Light Truck or Delivery Services Drivers	2.8%	HS diploma	None	Short-term OJT
Secretaries and Administrative Assistants	2.6%	HS diploma	None	Short-term OJT
Warehousing and Storage				
Laborers and Freight Movers	26.4%	Less than HS	None	Short-term OJT
Packers and Packagers, Hand	14.0%	Less than HS	None	Short-term OJT
Stock Clerks and Order Fillers	6.5%	Less than HS	None	Short-term OJT
Industrial Truck and Tractor Operators	5.8%	Less than HS	<1 year	Short-term OJT
Heavy/Tractor-Trailer Truck Drivers	4.6%	HS diploma	1-5 years	Short-term OJT
Shipping and Receiving Clerks	3.3%	HS diploma	None	Short-term OJT
Supervisors of Laborers and Material Movers	2.6%	HS diploma	1-5 years	None



Wholesale/Warehousing/Distribution				
Occupation	Pct of Industry Emp't	Entry-Level Education Required	Experience Required	OJT Required
General Office Clerks	1.9%	HS diploma	None	Short-term OJT
General Maintenance and Repair Workers	1.7%	HS diploma	None	Moderate-term OJT
Packaging and Filling Machine Operators	1.6%	HS diploma	None	Moderate-term OJT

Data Centers

Because data centers are often part of or colocated with corporate headquarters or back office facilities, staffing patterns are not available. Data centers rely on information technology professionals such as software developers and programmers, systems analysts, computer programmers, and network administrators (all of which require a bachelor's degree) as well as operations managers and electrical and electronic equipment mechanics.

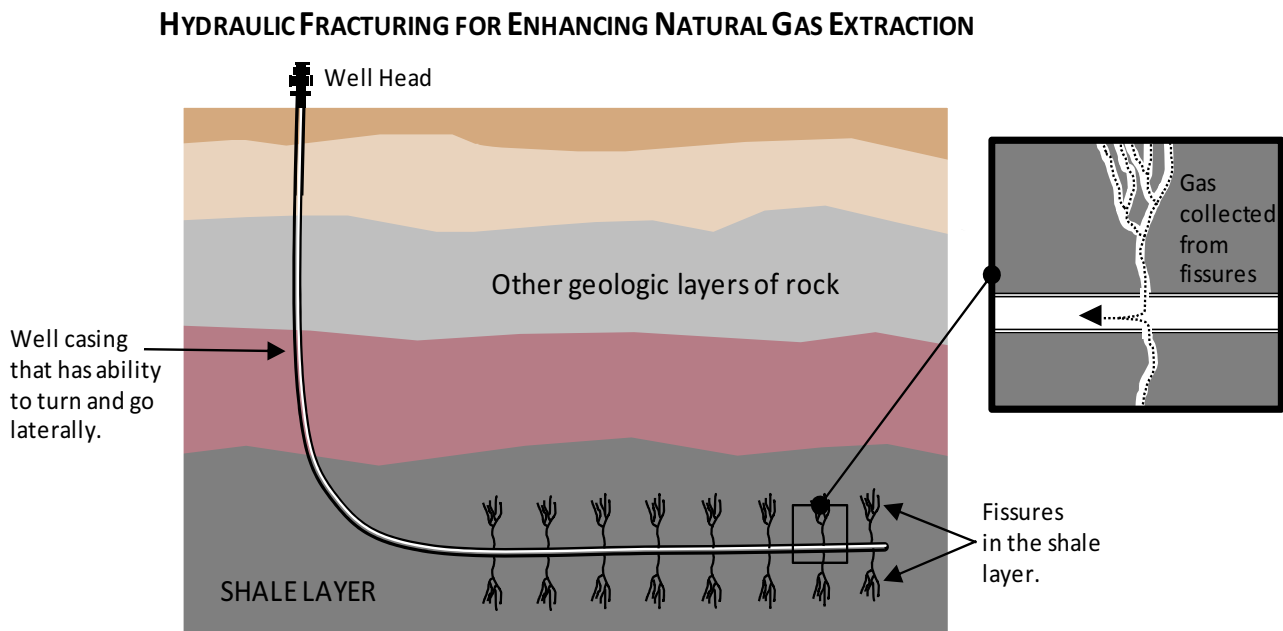


Supplemental Information - Target Industry Analysis

If Marcellus shale gas extraction through high-volume hydrofracking is approved by the State of New York, Broome County could serve as a center for business operations that support the natural gas industry. The discussion below focuses on the practice of hydrofracking, related industries, and labor requirements.

Natural Gas Derived From Shale Fracturing

Gas extraction from shale is facilitated through hydraulic fracturing known as “fracking.” In this technology that was initially developed in the 1940s, wells are drilled up to 10,000 feet vertically to the shale layer and then horizontally through the shale. A mixture of water and special chemicals is charged into the well under high pressure to further fracture the small cracks (fissures) in the shale to make it more permeable. It is then filled with sand to hold the fissures open. Gas migrates to the fissures and then into the well, and is brought to the surface for collection and storage. The process has been optimized over the past 20 years and is technically effective. However, environmentalists are concerned about the potential toxicity of the proprietary fracking chemicals and the disposal of the large quantities of wastewater.



The Marcellus Shale gas field in parts of New York, Pennsylvania, West Virginia and Ohio may have as much as 50 trillion cubic feet of natural gas that is recoverable from the region. Even at a much lower estimate, the emerging shale gas resources could represent a drastic shift in the cost of energy in North America. Drilling could also provide a substantial number of direct and indirect jobs within the region.

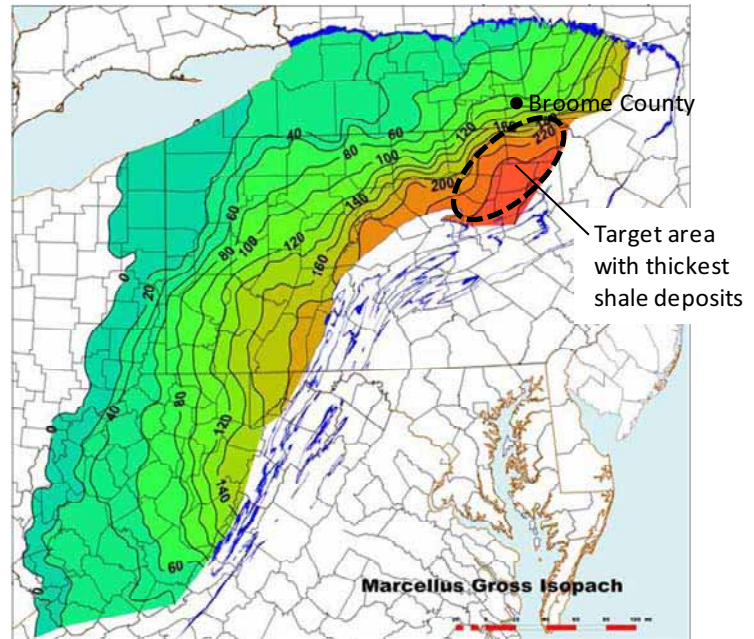


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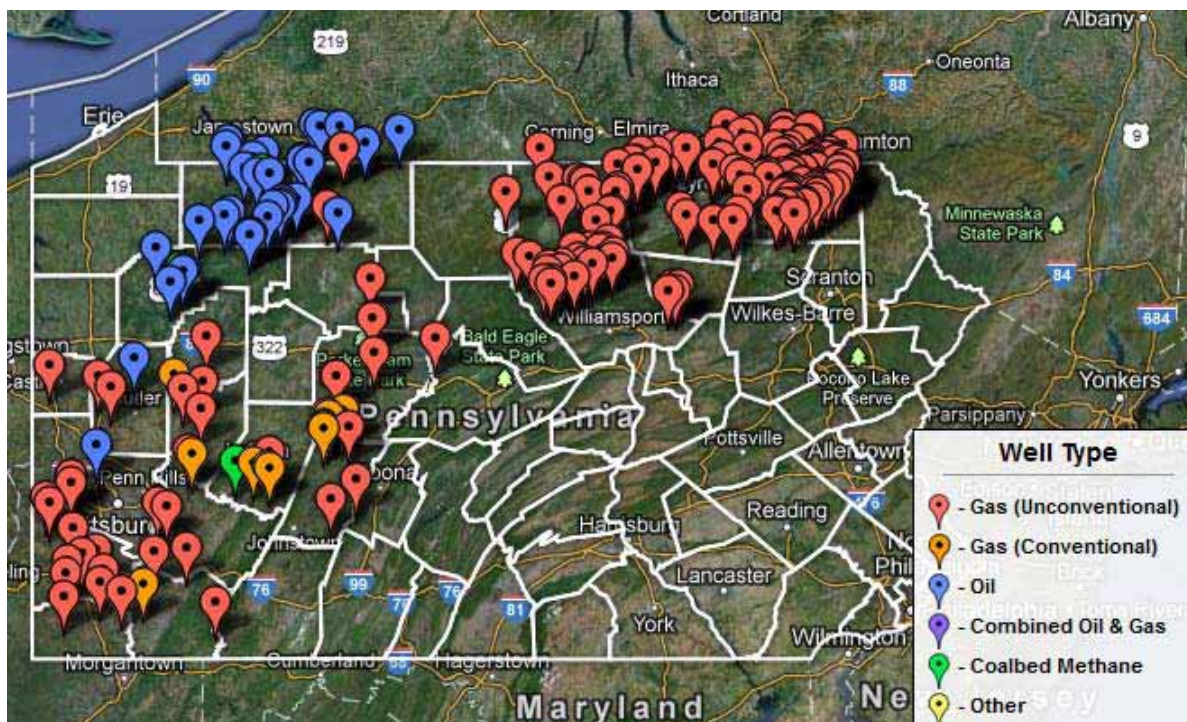
Specific businesses that can be directly derived from the drilling activity include:

- Water treatment equipment/systems sales and maintenance.
- Tanks, pumps and other equipment rental, sales and service.
- Water quality analysis services.
- Chemical storage and transportation.
- Fracturing tank heating services.

Since 2005, more than 2,300 well permits have been secured in Pennsylvania, with the majority in the northeastern and central section of the state as shown on the map below. Much of the support activity in this region has been focused around Williamsport, PA.



Extent and Depth (Isopach) of Marcellus Shale Deposits



Location of Wells In Pennsylvania

Marcellus Shale-Related Industries in Pennsylvania



An analysis of Pennsylvania’s “Marcellus Shale-related industries and related economic activity” is produced by the Center for Workforce Information & Analysis (CWIA) at the state’s Department of Labor and Industry. Most of the information in the document relates to a group of six industries referred as “core”⁷ and a group of 30 industries identified as “ancillary.” Industries in the latter group were selected based on factors that included significant employment gains in an industry in a Marcellus Shale geographic region.

Based on data from the Quarterly Census of Employment and Wages (QCEW), approximately 31,000 workers statewide were employed in Marcellus Shale core industries as of the 3rd quarter of 2012. This reflects an increase of nearly 164% since the same period in 2009. Meanwhile, employment in the ancillary industries totaled 214,300, or 8% more than the 3rd quarter of 2012. With respect to employment, the largest industries identified as ancillary included:

- Engineering Services (NAICS 541330)
- Highway, Street, and Bridge Construction (237310)
- Iron and Steel Mills and Ferroalloy Manufacturing (331110)
- Specialized Freight Trucking, Local (484220)
- Industrial Machinery & Equipment Wholesalers (423830)
- General Freight Trucking, Local (484110)
- Nonresidential Site Preparation Contractors (238912)
- Testing Laboratories (541380)
- Commercial & Industrial Machinery and Equipment Repair (811310)
- Water Supply & Irrigation Systems (221310)

This list may provide an indication of the types of industries likely to be directly affected by hydrofracking activity should it be approved in the State of New York. Wages in Marcellus Shale core and ancillary industries in Pennsylvania tend to be above-average; according to the CWIA, the average wage in the core industries was \$34,721 higher than the average across all industries, while in the ancillary industries, it was \$16,637 higher.⁸

⁷ Core industries by NAICS: Crude Petroleum & Natural Gas Extraction (211111); Natural Gas Liquid Extraction (211112); Drilling Oil & Gas Wells (213111); Support Activities for Oil & Gas Operations (213112); Oil & Gas Pipeline & Related Structures Construction (237120); and Pipeline Transportation of Natural Gas (486210).

⁸ Center for Workforce Information & Analysis, PA Department of Labor and Industry, *Marcellus Shale Fast Facts*, May 2013 Edition. www.paworkstats.pa.gov



Labor Requirements for High-Volume Hydrofracking

The table below lists the top occupations in this industry with relevant education and training requirements. As noted in the Workforce Profile, the Broome-Tioga Workforce Investment Board has received funding to train individuals for employment in the gas extraction industry.

High-Volume Hydrofracking / Activities for Oil & Gas Operations			
Occupation	Entry-Level Education Required	Experience Required	OJT Required
Rotary Drill Operators – Oil and Gas	Less than HS	None	Moderate-term OJT
Roustabouts - Oil and Gas	Less than HS	None	Moderate-term OJT
Operating Engineers and Equipment Operators	HS diploma	None	Moderate-term OJT
Service-Unit Operators, Oil, Gas and Mining	Less than HS	None	Moderate-term OJT
Helpers-Extraction Workers	HS diploma	None	Short-term OJT
General Office Clerks	HS diploma	None	Short-term OJT
Supervisors - Trades and Extraction Workers	HS diploma	> 5 years	None
Heavy/Tractor-Trailer Truck Drivers	HS diploma	1-5 years	Short-term OJT
Construction Laborers	Less than HS	None	Short-term OJT
Secretaries and Administrative Assistants	HS diploma	None	Short-term OJT

Source: PA Department of Labor and Industry, with education and training requirements from the U.S. Bureau of Labor Statistics.



Real Estate Assessment

Introduction

Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis include an economic profile of Broome County, a profile of the local workforce, a real estate assessment, a target industry analysis, and an incentive evaluation. This document is the third deliverable.

Real estate (both sites and existing buildings) is a critical component of economic development and should align with the needs of specific industries and companies. When local companies and those seeking to relocate into the area evaluate real estate, they base their decisions on factors that include:

- The size and physical attributes of the building, quality of space, and the ability to secure additional space or expand.
- Cost of space and terms of agreement (tenant improvement allowance, lease with option to buy, escalation of rent over time, etc.).
- Access to transportation and parking. Access to an interstate or other limited access highway is an important criterion for industrial and warehousing operations. Parking and access to primary highways and interstates is important for large office operations.
- Cost and availability (reliability) of utilities that serve the site: power, water, sewer, natural gas and telecom.
- The readiness of the building or site, which impacts the speed of being up and running, and the level of perceived risk in meeting budget and schedule targets.

An important issue to keep in mind is that having real estate options available is a fundamental factor in attracting and expanding businesses, but is not a guarantee that business will come to or remain in the area.

Defining Real Estate Readiness

For the prospective company seeking to expand in or relocate to a given location, the level of readiness of the available real estate properties is critical for two reasons:

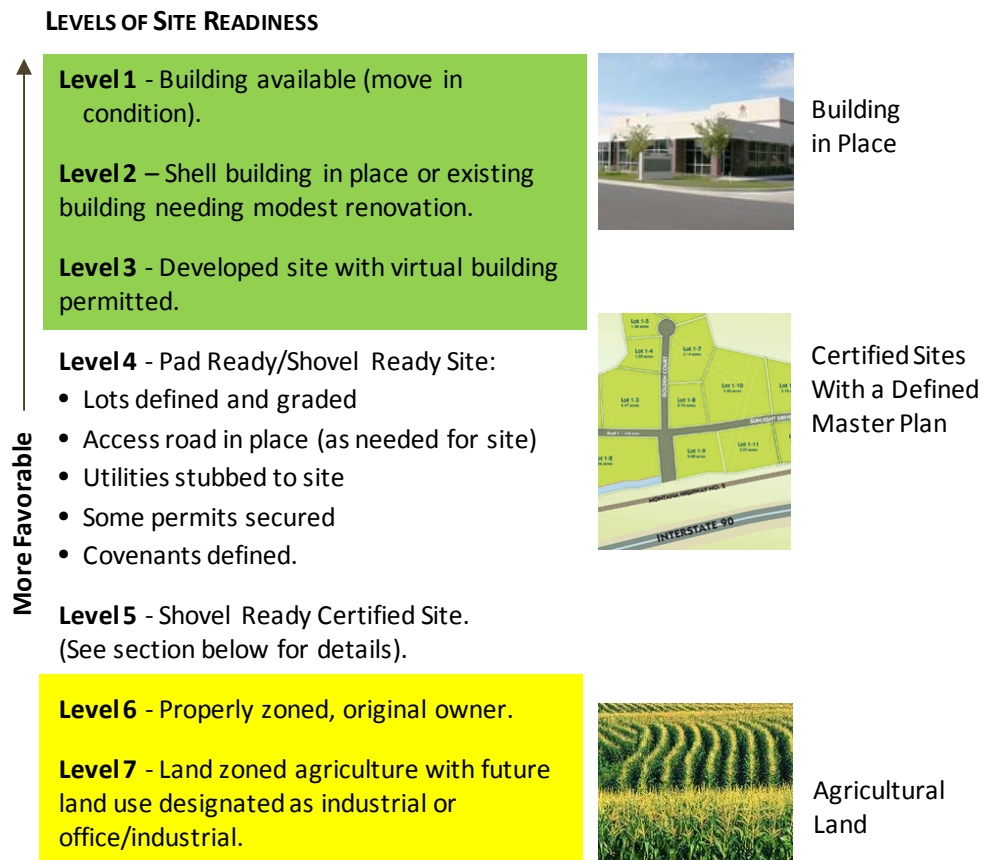
- It impacts the time required to get an operation up and running and turning a profit; and
- It minimizes the potential risks related to hidden costs and liabilities.

Smaller companies and those seeking "general space" will typically opt for available buildings for lease with an option to buy. Pad-ready sites that are shovel ready would be the backup position. Larger companies and those with specialized real estate needs will seek to purchase a shovel- or pad-ready site to minimize the construction time.



The chart below outlines the seven levels of real estate readiness, ranging from agricultural land on up to a move-in-ready building. Levels 6 and 7 are considered the least attractive, because they present the highest potential level of risk and time required to prepare for construction. The Level 5 shovel-ready site has undergone a series of tests and other criteria to be certified (see section below), and the pad-ready site has been all or partially excavated and utilities are stubbed to the site.

Level 3 represents a hedge against time for permitting by having a basic building (approximately 50,000 square feet) virtually designed and pre-permitted. This can save prospective companies valuable time if they pursue construction with limited changes in detail. This approach also sends a signal to the marketplace as to the building design that would be acceptable to the planning and review team in the community.



Not reflected in this chart are former industrial sites where aggregation, environmental assessment and remediation, and demolition are required to bring these sites to a reasonable level of readiness. Many sites that could potentially accommodate industrial and commercial uses in Broome County (e.g., the Brandywine Corridor in Binghamton) fall into this category. The utilities available at each site will have to be evaluated for capacity and condition and upgraded as necessary.



Shovel Ready Criteria

The basic criteria required for certification as a “shovel ready” site in New York State include:

- ☑ Contact information for the site is provided.
- ☑ Details about the site are defined, including the size of the site/lots, current condition, adjacent uses, distance to airport and interstate, and other pertinent information.
- ☑ Ownership of the site is officially documented and in the hands of a third party ready to sell.
- ☑ Basic tests have been completed on the site, such as:
 - Soils analysis for structural integrity based on core samples that provide evidence of the types and depths of soil deposits, depth to groundwater, depth to bedrock, etc.
 - Environmental Site Assessment - Phase I (ASTM E1527-05 Standard Practice for Environmental Site Assessments)
 - Contamination issues have been addressed to state/federal standards and the range of uses have been defined (if it is a brownfield site)
 - Assessment of site’s historical significance (buildings, Indian sites, graveyards, battle sites, etc.)
 - Wetlands analysis/minimization/mitigation plan, 100-year flood plain presence, etc.
 - Protected and rare species evaluation
 - Traffic impact study
 - Stormwater management
- ☑ A general site plan has been developed to define net usable land, water retention areas, and access roads.
- ☑ Utilities and road/rail access have been identified and the cost/timing for any required installation is reasonable.
- ☑ Covenants and any building design guidelines for the site have been generally defined (types of storage, types of processes, materials of construction, etc.)



There are a number of shovel ready certified sites in New York State – in the counties of Tioga, Chemung, and Steuben, for example, as well as in the Albany, Syracuse, and Buffalo metropolitan areas – but none is in Broome County. This impacts Broome County’s overall competitiveness. Pennsylvania also has sites that are shovel ready according to that state’s criteria.



Real Estate Requirements for Selected Functions

Real estate requirements for selected target industries or types of operations are presented in **Table 1** below, and then compared with the existing inventory of sites and buildings in the section that follows. Any gaps in “supply vs. demand” for real estate will be reflected in the report recommendations.

Table 1: Real Estate Requirements for Target Industries and Types of Operations	
Type of Operation	Real Estate Requirements
Manufacturing	<p>25,000 to 100,000 square feet (SF) expandable industrial flex space with:</p> <ul style="list-style-type: none"> ▪ Ceiling heights of 25+ feet and column widths of 40+ feet ▪ Lease rates for space \$3 to \$5 per SF are common. ▪ Access to industrial-grade utilities. Utility requirements will vary by type of industry and size/type of operation. Some industries like food and beverage need high water and sewer capacities. Having natural gas is important as the price continues to be more competitive. ▪ Having buildings less than 20 years old is important due to code changes and potential contamination of older properties over long periods of use; also, layouts tend to be chopped up and specialized over time. ▪ Preference for being within 1-2 miles of an interstate to limit truck traffic on two-lane highways past schools, residential areas, hospitals, major retail corridors, and other sensitive areas. <p>Option to build on 5 to 100 acre sites within an industrial park that has access to utilities and is close to shovel ready or pad ready status. Cost of land is typically \$30,000 in tertiary markets and up to \$100,000+ in secondary markets.</p>
Professional, Technical, and Business services	10,000 to 75,000 SF of Class A or B office space downtown with access to amenities such as restaurants and retail with 4 parking spaces per 1,000 SF and reasonable access to interstate and primary feeder highways.
Back Office and Customer Service	10,000 to 75,000 SF of Class B office space in suburbs with access to amenities such as restaurants and retail with 4-5 parking spaces per 1,000 SF and reasonable access to interstate and primary feeder highways.
Warehouse/Distribution Center	Parcels of 5 to 25 acres within an industrial park that has short distance access (1-2 miles) to interstate via a primary feeder highway and near shovel ready status.
Data Centers	Sites or appropriate buildings with access to highly reliable and low cost double-feed electric power and telecom services. The location should be relatively obscure for security purposes. Typical operations are placed in an existing building conducive to cables and cooling functions or are built on lots that are 5 to 15 acres away from natural disasters.



Existing Real Estate Availability

A compilation of existing sites as well as industrial and office space that meets the criteria defined above is presented in **Tables 2, 3, and 4** below with comments.

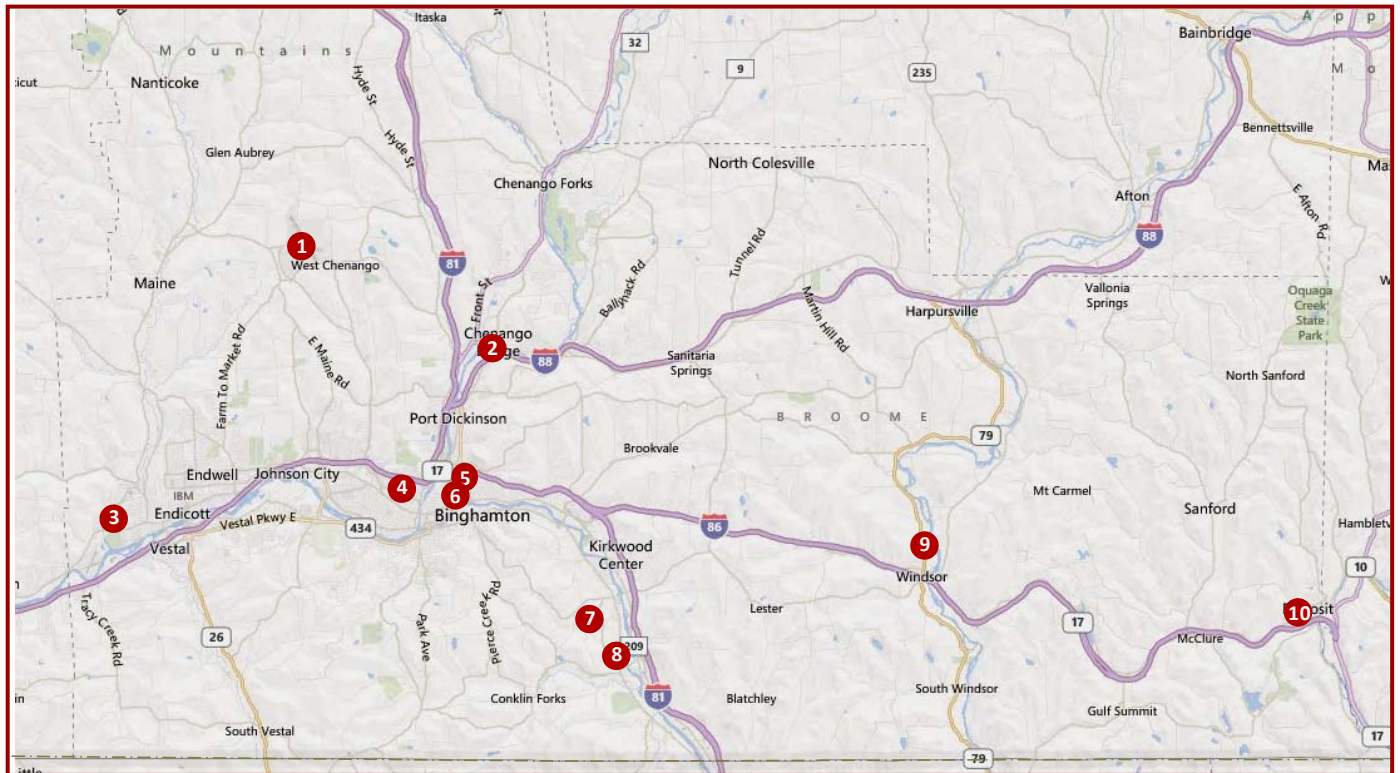
Table 2: Available Industrial/Commercial Sites in Broome County (5+ Acres in Total Area)

	Description	Acres	Cost/Acre	Owner	Utilities Available	Zoning	Rail	Comments
1	Binghamton Airport, Maine Site 1A Site 1B Site 2 Site 3 Site 4 Site 5	28 74 87 13 42 42	Currently being established	Broome Co.	Power and water (nearby), sewer being installed in 2014; several of the sites have telecom/Internet.	Industrial	No	Majority of land is forested/undeveloped . Located 5+ miles from the interstate via a two-lane highway through residential areas.
2	70 Chenango Bridge Road, Chenango	13.3	\$37,218	Private Owner	Power, water, telecom, cable	Commercial	No	Off Route 12A near I-88. Adjacent to Chenango River.
3A	100 LaTourette Lane, Union	5.5	\$31,760	N/A	Full utilities	Industrial	No	Near Glendale Tech Park and sports park. Long/narrow site.
3B	1355 Campville Road, Union	18.5	\$18,750	Private Owner	Power, telecom, cable	Industrial	No	Near Glendale Tech Park. 10+/- usable acres.
4	Charles Street Business Park, Binghamton	25+	\$30,000+	Broome Co. IDA	Full utilities	Industrial	No	"Clean" former GAF film (or Anitec) site. Adjacent to residential area.
5	Broad Avenue Railroad Property, Binghamton	12.5	N/A	CP Rail	Full utilities in the vicinity of the site	Industrial	Yes	Owned by CP Railroad, which would like an industrial rail client.
6	67, 71 Frederick Street, Binghamton	11.2	N/A	Broome Co. IDA	Full utilities	Industrial	No	Older existing buildings on the site.
7	399 Broome Corporate Pkwy, Conklin	26.2	\$30,000	Private Owner	Full utilities	Industrial	No	Within Broome Corporate Park with interstate access.
8	379 Broome Corporate Pkwy, Conklin	21.5	N/A	Broome Co. IDA	Full utilities	Industrial	No	Within Broome Corporate Park with interstate access.
9	Off Exit 77, Windsor	80	N/A	Private Owner	Power, water, sewer	Commercial	No	Immediate labor force is limited.
10	Borden Street, Deposit	7.46	N/A	Private Owner	Power, water, sewer	Industrial	No	Adjacent to residential properties and river. Immediate labor force is limited.



Broome County Comprehensive Plan *Building our Future*

Industrial/Commercial Sites In Broome County (5+ Acres in Total Area) Numbers Refer to Site Numbers in Table 2

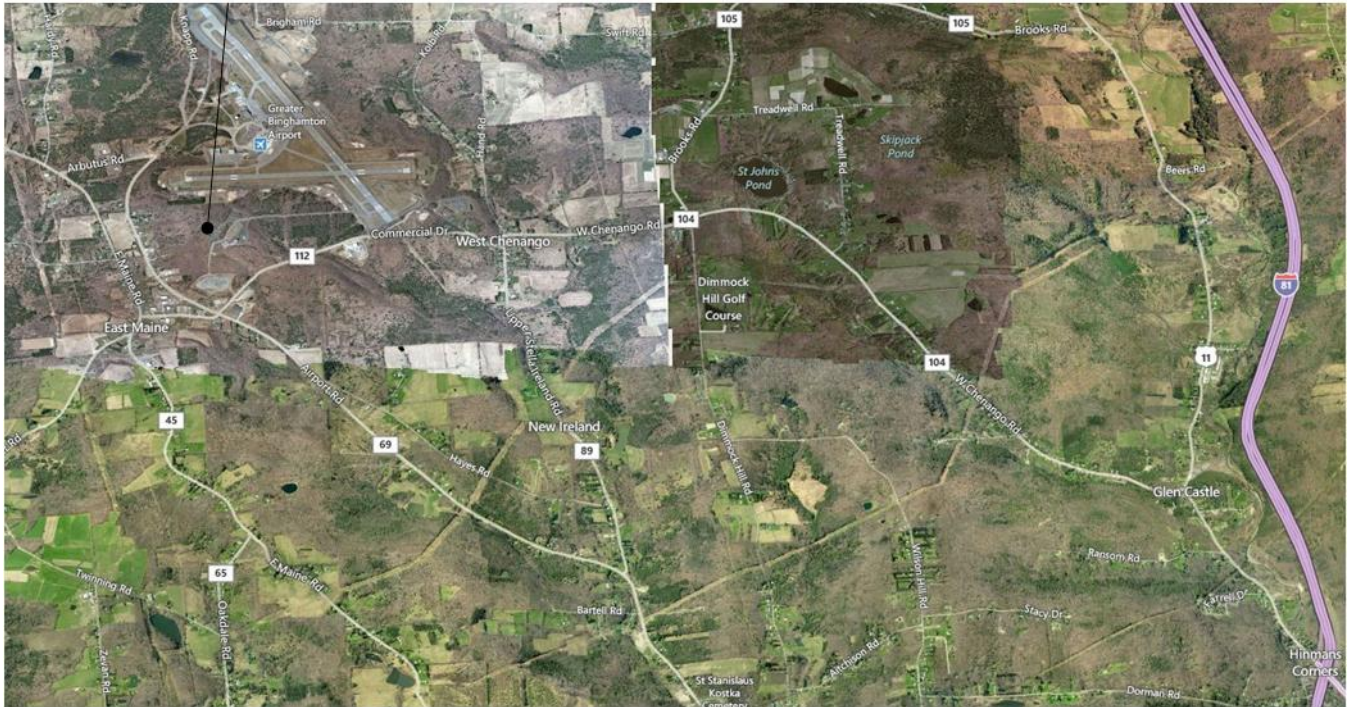




Broome County Comprehensive Plan *Building our Future*

Binghamton Airport Sites ❶

Airport sites



70 Chenango Bridge Road, Chenango ❷

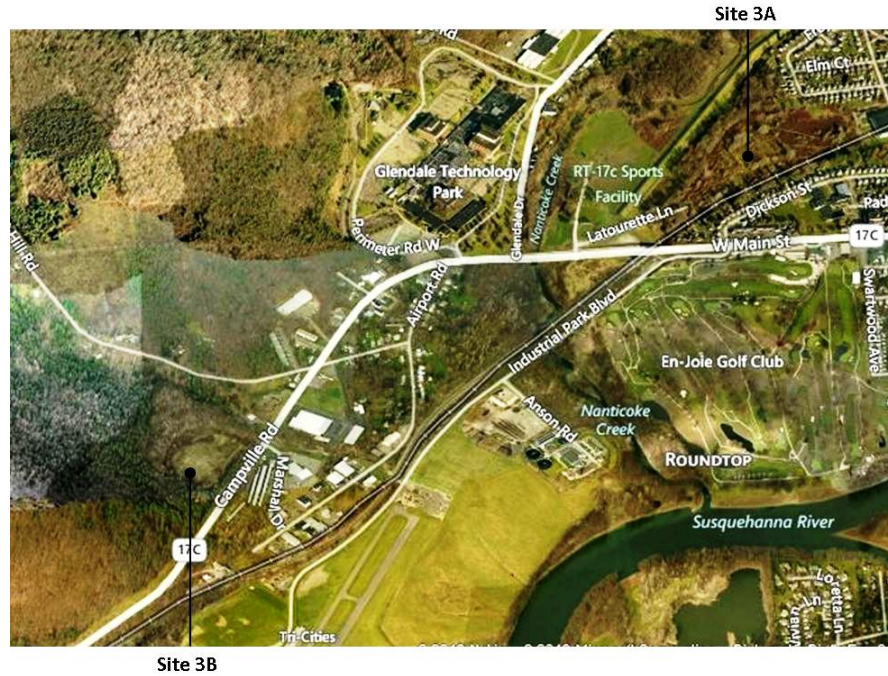
Site 2





Broome County Comprehensive Plan *Building our Future*

100 LaTourette Lane (A) and 1355 Campville Road (B), Union ③



Charles Street Business Park, Binghamton ④





Broome County Comprehensive Plan *Building our Future*

Broad Avenue Railroad Property **5** and 67/71 Frederick Street **6**



Site 5

Site 6



Broome County Comprehensive Plan *Building our Future*

Broome Corporate Park 7 and 8



Additional 6.7 acre site also available (private owner)



Broome County Comprehensive Plan *Building our Future*

Exit 77 Site in Windsor ⑨

Site 9



Borden Street, Deposit ⑩

Site 10





Table 3: Available Industrial Buildings in Broome County (10,000+ Square Feet)
Arranged in Order and Grouped by Size: >100,000 SF, 50,000 to 100,000 SF, 25,000 to 50,000 SF, and <25,000 SF

	Location	Type of Space	Size (Sq Ft)	Sale Rate \$/Sq Ft	Lease Rate \$/Sq Ft	Ceiling Height	Age of Building	Comments
1	Huron Campus, Endicott (contains significant quantity of multiple types of space)	Industrial	160,000+ 30,000+		~\$4-\$5 ~\$4-\$5	15' 22'+	>20 Yrs. but in good condition	Low cost power (5.3 to 6.9 cents/kWh). Access to 2 MGD sewer capacity, high purity water, central cooling, data center quality telecom
2	33 Lewis Road, Union	Industrial Flex Space	175,000		*	N/A	>20 Yrs.	Part of a 500,000+ SF complex
3	71 Frederick Street, Binghamton	Warehouse	170,000	Negotiable	Negotiable	N/A	>20 Yrs.	Multiple buildings
4	20 Valley Street, Union	Industrial	120,000	\$20.83	\$4	20'	>20 yrs. 1981	Former Amphenol bldg.
5	200 Court Street, Binghamton	Industrial Flex Space	100,000		\$2	N/A	>20 Yrs.	
6	30 Charlotte Street, Binghamton	Industrial	81,771		*	12'	>20 Yrs.	Former Indian Valley Bag plant
7	93 Ely Street, Binghamton	Industrial	63,500		*	23'	>20 Yrs.	
8	265 Industrial Park Drive, Kirkwood	Industrial	60,000		*	18'	>20 Yrs.	
9	10 Alice Street, Binghamton	Industrial	54,800		*	15'	>20 Yrs.	Former Haworth Press bldg
10	336 Court Street, Binghamton	Industrial Mfg./ Warehouse	52,419	\$7.63	\$2.50	24'	>20 Yrs.	
11	720 Azon Road, Johnson City	Industrial	40,000		*	20'	>20 yrs.	
12	121 Second Street, Deposit	Storage	36,000	\$8.31	*	16'	>20 yrs.	Brick bldg, former school; 121-125 Second Street
13	1010 Conklin Rd., Conklin	Industrial	34,820	\$24.41	*	Multi	>20 yrs. 1976	Former S&T Knitting building
14	448 Commerce Rd Vestal	Industrial	27,864	\$24.94	*	14'	>20 yrs. 1985	
15	72 Grossett Drive, Kirkwood	Industrial	22,400		*	16'	>20 Yrs.	



Table 3: Available Industrial Buildings in Broome County (10,000+ Square Feet)
Arranged in Order and Grouped by Size: >100,000 SF, 50,000 to 100,000 SF, 25,000 to 50,000 SF, and <25,000 SF

	Location	Type of Space	Size (Sq Ft)	Sale Rate \$/Sq Ft	Lease Rate \$/Sq Ft	Ceiling Height	Age of Building	Comments
16	811 North Street, Endicott	Industrial	21,200		*	N/A	>20 Yrs.	
17	56 Broome Corporate Pkwy, Conklin	Industrial	20,000		*	22'	>20 Yrs.	Business Growth Center, within Broome Corporate Park.
18	49 Griswold Street, Binghamton	Industrial	19,600		*	12'	>20 Yrs.	
19	142 Corporate Dr., Kirkwood	Industrial Flex Space	19,200		\$7	14'	>20 yrs. 1990	
20	404-408 Front Street, Vestal	Industrial Warehouse	17,964		*	24'	>20 yrs.	Multi-building
21	328 Water Street, Binghamton	Industrial Mfg.	13,155	\$12.54	*	N/A	>20 yrs. 1970	Former Emerson Electronics building
22	167 Conklin Ave., Binghamton	Industrial Mfg.	11,568	\$24.64	*	9'	>20 Yrs. 1960	Current trucking garage
23	816 Conklin Rd., Binghamton	Warehouse	11,430	\$39.37	*	9'	>20 Yrs. 1920	
24	402 Airport Road, Union	Warehouse	10,280		\$4.50	16'	>20 yrs.	
25	73 Griswold Street, Binghamton	Industrial	10,000		*	18'	>20 yrs.	

*Many local property owners prefer not to publish a lease rate but are prepared to negotiate with a prospective company based on terms of lease, improvement requirements and other factors.

Based on a Q4 2012 report from Cushman & Wakefield on industrial space in the Binghamton market, the average asking price for industrial space was \$4.90/SF and over the last year has been as low as \$4.45/SF. The report also noted: "Market growth is critically restricted by the lack of availability of newer, functional high bay space..."¹

¹ Marketbeat Industrial Snapshot: Binghamton, NY, Q4 2012, www.pyramidbrokerage.com/Binghamton_IND_4Q12.pdf.



Table 4: Available Office Buildings Within Broome County (10,000+ Square Feet)

	Location/Designation	Size (Sq Ft)	Sale Rate \$/Sq Ft	Lease Rate \$/Sq Ft	Class of Space	Parking	Comments
1	Glendale Technology Park, Union	300,000		*	A/B	Ample	
2	Huron Campus, Endicott	90,000+ contiguous		\$9.75	A (older)	Ample	Substantial amount of office space available
3	23 Jackson Avenue, Endicott	96,280	\$4		B/C	Ample	Former school
4	18 Link Drive, Binghamton	93,668		\$15.95	A	Ample	Part of a 215,550 SF building; high visibility location off Interstate 81
5	Centre Plaza, 53 Chenango Street, Binghamton	35,000		*	A	Ample	In downtown business district
6	21 Chenango Street, Binghamton	27,000		*	B	Ample	In downtown business district
7	31 Lewis Street (Kilmer Building), Binghamton	19,000		*	B	Ample	Historic building in downtown business district
8	15 Avenue B, Johnson City	10,500	\$46.38		A	Ample	Converted firehouse

* Many local property owners prefer not to publish a lease rate but are prepared to negotiate with a prospective company based on terms of lease, improvement requirements and other factors.

Note: What constitutes “A” space in a tertiary market would frequently be considered “B” or lower in a larger market.

A Q4 2012 report from Cushman & Wakefield on office space in the Binghamton market indicates that the average asking price for office space was \$12.24/SF, reflecting typical rates in a tertiary market.



Evaluation of Available Real Estate

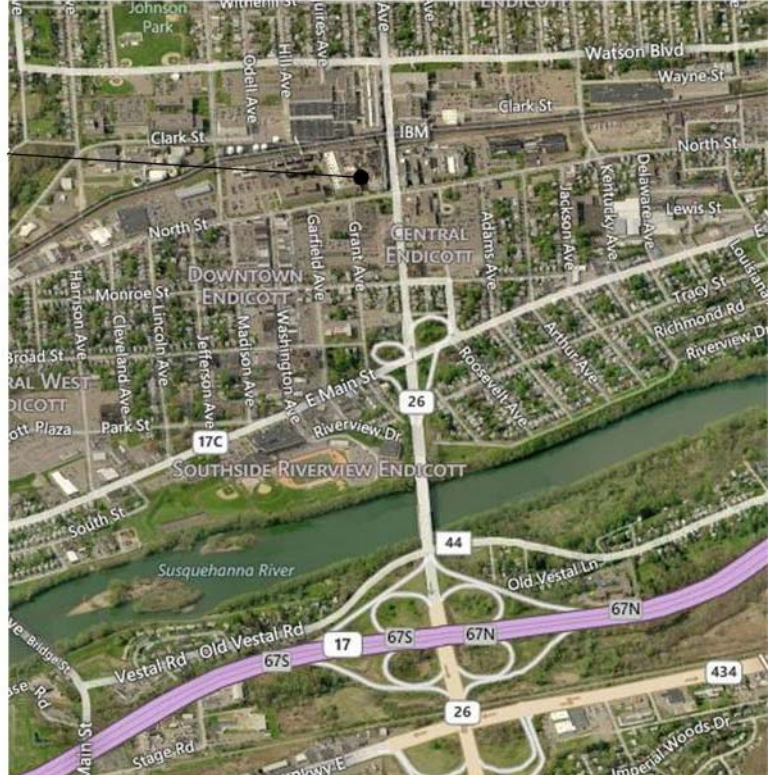
A comparison of existing real estate with requirements by type of operation is presented in **Table 5** below with comments and observations.

Table 5: Available Options That Match Needs by Type of Operation	
Industry or Operation	Comments and Observations
Manufacturing	<p>Option 1: Available buildings 25,000 to 100,000 square feet (SF) expandable flex space, <20 years old, 25+ ceiling heights, 40+ ft column widths within 1-2 miles of interstate. Full complement of industrial grade utilities available that are competitively priced.</p> <ul style="list-style-type: none"> All available buildings are >20 years old. The Huron Campus has space in good condition served by some very competitively priced utilities with significant capacity. They receive power at 115 kV and offer favorable rates of 5.3 to 6.9 cents/kWh. There are multiple buildings with 20' to 24' ceiling heights that might be adequate depending on condition but they do not have access to the favorable power rates unless they are major energy users. <p>Option 2: Available sites that are 5 to 100 acres (depending on size of facility) within an industrial park that has access to utilities and is close to shovel ready or pad ready status.</p> <ul style="list-style-type: none"> There are no shovel ready sites in the County which places the area at a disadvantage. Multiple sites have been utilized previously and will need formal Environmental Assessments completed. Sites such as the Charles Street Business Park and the Broome Corporate Park in Conklin have a full complement of utilities offered.
Professional, Technical, and Business services	<p>10,000 to 75,000 SF of Class A or B office space downtown with access to amenities such as restaurants and retail with 4 parking spaces per 1,000 SF and reasonable access to interstate and primary feeder highways.</p> <ul style="list-style-type: none"> Options available but limited.
Back Office and Customer Service Operations	<p>10,000 to 75,000 SF of Class B office space in suburbs with access to amenities such as restaurants and retail with 4-5 parking spaces per 1,000 SF and reasonable access to interstate and primary feeder highways.</p> <ul style="list-style-type: none"> Options available but limited.
Warehouse/Distribution Center	<p>Parcels of 5 to 25 acres within an industrial park that has short distance access (1-2 miles) to interstate via a primary feeder highway and near shovel ready status.</p> <ul style="list-style-type: none"> Broome Corporate Park is a strong option if the prospective company needs <45 acres.
Data Centers	<p>Sites or appropriate buildings with access to highly reliable and low cost double-feed electric power and telecom services. The location should be relatively obscure for security purposes. Typical operations are placed in an existing building conducive to cables and cooling functions or be built on lots that are 5 to 15 acres away from natural disasters.</p> <ul style="list-style-type: none"> The Huron Campus with its available space and utilities provides a favorable option for locating a data center in the County. It already hosts several data centers on the campus.



Summary Observations

- A substantial number of manufacturing buildings are available in Broome County, but most are less than 20 feet in height and all are over 20 years old. As noted in Cushman & Wakefield’s recent quarterly report: “Market growth is critically restricted by the lack of availability of newer, functional high bay space...” The situation is such that no one is willing to take a risk and engage in speculative construction; however, without any newer and appropriately designed product on the market, the chances of attracting outside businesses that want to lease a newer building is slim.
- The Shovel Ready Sites Program essentially began in New York State and has received significant exposure within states that want to attract industry. Having at least one state-certified shovel ready site sends the message that the community wants business growth and is willing to invest to have a site at a higher level of readiness and lower risk. It is a program that is viewed seriously by companies and consultants and becomes a critical market differentiator.
- The former BAE Systems site at 600 Main Street in the Town of Union is owned by the U.S. Air Force. The building occupied by BAE was destroyed in the flood of 2011, and the company subsequently relocated to the Huron Campus. The Air Force has agreed to clear the site and turn it over to the Broome County IDA. Eventually, the 27.2-acre property could be made available for industrial development; however, it is compromised by the threat of potential future flooding, and any redevelopment will need to be designed with this in mind.
- Utility costs (primarily power) and property taxes are an issue for businesses considering the Binghamton area and New York State in general. Properties at the Huron Campus have access to competitively priced space with readily available high volume/quality utilities at very competitive rates. This places the area in a very positive position, and should be heavily promoted as a lead-in for marketing the area.



Huron Campus in Endicott showing direct access to U.S. 17/I-88 via Route 26.



Broome County Comprehensive Plan

Building our Future

- There is a significant amount of office space available in Broome County at reasonable prices (because it is in a tertiary market), with the benefit of access to a major university with business, engineering, scientific, and other talent. This is advantageous in attracting providers of professional and technical services and back office operations to the area.
- The combination of the data center research being conducted at Binghamton University and the low-cost, high-quality facilities and power at the Huron Campus position Broome County as a favorable location for data centers.



Incentive Evaluation

Introduction

Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis include an economic profile of Broome County, a real estate assessment, a profile of the local workforce, a target industry analysis, and an incentive evaluation.

This document provides a summary of the local, regional, and state incentives currently available to businesses for locating or expanding in Broome County, and evaluates the relative cost of doing business in Broome County compared to other key locations. It should be noted that the report includes only the most significant and/or frequently-used incentives.

Overview of Incentives

An economic incentive can be defined as any factor (financial or non-financial) that provides a motive for a particular course of action, or counts as a reason for preferring one choice over alternatives. In economic development, incentives may be used to mitigate competitive disadvantages that impact a company's profitability, such as high energy costs or local property taxes. Incentives may also be offered to enhance local resources – for example, training to prepare workers for specific types of jobs, or extending a sewer line to serve an industrial site. Commonly-used types of incentives are listed in **Table 1**.

Table 1: Commonly-Used Types of Incentives	
State	Local
Corporate income tax credits	Property tax exemptions and PILOT agreements
Sales/use tax exemptions	Sales/use tax exemptions
Investment grants	Industrial revenue bonds
Access to low-interest loans	Access to low-interest loans / revolving loan funds
Infrastructure assistance	Infrastructure assistance
Subsidized job training	Subsidized land or buildings
Utility incentives – e.g., extensions, rate reductions	Mortgage recording tax exemptions

A nationwide survey of state incentive program managers has been conducted annually by the Council for Community and Economic Research, a non-profit, non-partisan membership organization, since 1999. According to the organization, there are nearly 1,800 economic development incentive programs currently in use by states to influence the location of business investment and promote job opportunities. Although the services and tools offered vary, the Council reports that “financial assistance is still the primary approach that most states adopt, with about half of the programs providing tax-related benefits to businesses. In addition, nearly 35 percent of the programs provided direct financing and lending to businesses.” Some



incentive programs target broad sectors, while others are tailored to specific industries such as manufacturing, agriculture, or wholesale trade and distribution.¹

According to *Area Development Magazine's* annual survey of corporate executives, incentives are among the many factors that businesses consider when making location decisions. Location fundamentals (like labor) are typically at the top of the list, but when it comes to comparing sites, incentives come to the forefront. Relative interest in incentives also varies by type of operation and economic segment.

In the most recent ranking, *state and local incentives* ranked #13, considered “Very Important” or “Important” by 71% of respondents. Interestingly, state and local incentives were ranked higher, tied for fifth place, in the magazine’s 2011 survey. The magazine speculates that corporate executives have adjusted their priorities, realizing that incentives cannot make up for high labor costs, poor interstate access, or the lack of skilled labor.

Asked about various types of incentives, more than two-thirds of the survey respondents indicated that they believe tax incentives are the most important. Fully 70% feel that incentives are either somewhat or very important to moving a project forward in a particular location.

Table 2: Top Ten Site Selection Factors, 2012

Ranking	Factor	Percent
1	Labor Costs	90.8
2	Highway Accessibility	90.1
3	Availability of Skilled Labor	89.4
4	Availability of Skilled ICT Services	85.1
5	Occupancy or Construction Costs	82.8
6	Energy Availability and Costs	81.3
7	Corporate Tax Rate	79.3
8	Available Buildings*	78.4
9	Tax Exemptions	75.4
10	Low Union Profile	73.5

Source: *Area Development Magazine*, The 27th Annual Survey of Corporate Executives: Changing Site Selection Priorities, Winter 2013. <http://www.areadevelopment.com/Corporate-Consultants-Survey-Results>

Percentages reflect the total of “Very Important” and “Important” ratings. *Available Land was ranked #18.

¹ The Council for Community and Economic Research. *2012 State Economic Development Incentives Survey Report*, May 2013. Accessed at http://members.c2er.org/download/2012_Economic_Development_Program_Survey_Report.pdf.



New York State Incentives

Empire State Development Corporation (ESD) is a public finance and development authority that serves as New York's primary agent for economic development. Its mission is to "promote a vigorous and growing economy, encourage the creation of new job and economic opportunities, increase revenues to the State and its municipalities, and achieve stable and diversified local economies." Through the use of loans, grants, tax credits and other forms of financial assistance, ESD strives to enhance private business investment and growth to spur job creation across New York State.

Examples of financial and tax incentives offered by ESD and other state agencies are described below.

Excelsior Jobs Program

According to ESD, the Excelsior Jobs Program "provides job creation and investment incentives to firms in such targeted industries as biotechnology, pharmaceutical, high-tech, clean-technology, green technology, financial services, agriculture and manufacturing." Firms in these industries that create and maintain new jobs or make significant capital investments are eligible to apply for up to four fully refundable tax credits:

- **Excelsior Jobs Tax Credit:** A credit of 6.85% of gross wages per new job to cover a portion of the associated payroll cost.
- **Excelsior Investment Tax Credit:** Valued at 2% of qualified investments.
- **Excelsior Research & Development Tax Credit:** A credit of 50% of the federal R&D credit, capped at 3% of research expenditures in New York State.
- **Excelsior Real Property Tax Credit:** Available to firms in targeted industries that meet higher employment and investment thresholds (Regionally Significant Project), and to firms locating in certain economically distressed areas, known as Investment Zones, which include the City of Binghamton and the Village of Johnson City.

All employers approved for participation in the Excelsior Program are eligible to apply for the Jobs, Investment, and R&D Tax Credits. Participation is based on job creation and capital investment, with minimum eligibility criteria established for each strategic industry; for example, manufacturers must create at least 10 new jobs, while distribution facilities must create at least 75.² Certain types of establishments (e.g., real estate, legal services, utilities, business services) are not eligible to participate. To receive the Real Property Tax Credit, the business must meet higher thresholds for jobs and investment.

Based on a quarterly report dated March 31, 2013, no businesses in Broome County are currently participating in the Excelsior Program.

² These thresholds were reduced under legislation passed in June 2013, opening the program to smaller companies. Previously, the job creation thresholds were 25 for manufacturing and 150 for distribution facilities.



JOBS Now

The JOBS Now Program offers loans and grants for major business expansion and attraction projects in the state. It is primarily directed toward large projects that create at least 300 new full-time jobs. Eligible businesses include private businesses involved in industrial, manufacturing, warehousing and distribution activities, and research and development, high-technology, service, and other non-retail commercial enterprises.

JOBS Now has three categories of funding:

- **Economic Development Loans and Grants:** Up to \$10,000 per job for projects involving construction and expansion of facilities; funds may be used for real estate acquisition, demolition, construction, infrastructure development, machinery and equipment, inventory, and construction-related planning and design.
- **Job Creation Grants:** Up to \$1.5 million, depending on the number of jobs created, to reimburse state and local taxes incurred related to business expansion that involves capital or working capital expenses.
- **Workforce Training Grants:** Full or partial reimbursement of training costs associated with an expansion or attraction project; funds may be used for workforce recruitment, skills training and or upgrading, productivity enhancement and total product service quality improvement.

Businesses in the area that have received financial assistance through the JOBS Now Program include Lockheed Martin, BAE Systems, and Nationwide Credit, Inc. (NCI).

Economic Development Fund

The Economic Development Fund (EDF) is a flexible program that assists companies with general development financing. It helps to increase business activity and facilitate job creation and retention in the state. EDF financing is available for construction, expansion and rehabilitation of facilities; acquisition of machinery and equipment; working capital; and the training of full-time permanent employees. Eligible businesses include private businesses involved in industrial, manufacturing, warehousing and distribution activities, and research and development, high-technology, service, and other non-retail commercial enterprises. Frito-Lay, National Pipe & Plastics, and Buckingham Manufacturing in Broome County and Sanmina in Tioga County are among the local businesses that have received funding through the state EDF.

Manufacturing Assistance Program

The Manufacturing Assistance Program encourages manufacturers to invest in projects that will improve their operations. The program supports projects that will significantly increase the productivity and competitiveness of business operations by providing up to \$1 million in grants to promote investment in machinery, equipment and associated building modifications.

Eligible manufacturers must employ 50 to 1,000 workers and export at least 30% of their production beyond the immediate region, or supply at least 30% of their production to a prime manufacturer that exports beyond the region. Projects in which there are reductions in employee benefits and wages are not eligible for assistance.



Other Incentives

Other incentives offered to companies expanding in or relocating to New York State include:

- Low-cost loans and grants to companies that invest significant capital and commit to the creation and retention of private sector jobs;
- Tax incentives for investment and job creation in Qualified Emerging Technology Companies (QETCs);
- Investment tax credits of up to 10% for businesses that create new jobs and make new investments in production property and equipment;
- A 9% corporate tax credit for investments in research and development facilities; and
- Liability relief and tax credits for the cleanup and redevelopment of brownfield sites.

The extent to which Broome County businesses have taken advantage of these financial and tax incentives could not be ascertained.

Recharge NY Power Program

The Recharge NY (RNY) Power Program is a statewide economic development power program for qualified businesses and non-profit organizations. It is designed to create and maintain jobs by allocating a blend of stable, low-cost hydropower and market power procured by the New York Power Authority. Allocations of RNY power are made through a competitive application process.

Key provisions include:

- A 910 megawatt program that gives the state more economic development power resources than previously available and opened the program to new applicants;
- Allocation-based power benefits and long-term contracts of up to seven years provide competitive, stable electric power prices to energy intensive businesses; and
- Eligibility criteria to ensure significant, long-term economic return to the state, including the number and value (wages and benefits) of jobs created and retained, investments in capital equipment and energy efficiency, the significance of energy costs to the competitiveness of the business, and the local economic significance of the facility.

Approved RNY power allocations in Broome County³ include BAE Systems (1,850 kW), Buckingham Manufacturing (96 kW), Huron Real Estate Associates LLC (10,000 kW), Maines Paper & Food Service (666 kW), National Pipe & Plastics (1,250 kW), and United Health Services (170 kW). Lockheed Martin in Owego also received an approved allocation (3,606 kW).

START-UP NY

Governor Cuomo recently proposed a new “Tax-Free NY” initiative for companies that locate on SUNY campuses outside New York City, including that of Binghamton University. Under this initiative – to be enacted legislatively as START-UP NY (SUNY Tax-free Areas to Revitalize and Transform Upstate NY) –

³ Through March 21, 2013.



businesses would pay no sales, business, or property taxes for their first decade on campus, and their employees would be exempt from paying income taxes for five years.⁴

Eligible businesses include companies with “a relationship to the academic mission of the university” and companies creating new jobs, including new businesses, out-of-state businesses that relocate to New York, and existing businesses that expand their New York operations, as long as they can demonstrate that they are creating new jobs and not moving existing ones. All businesses participating in the program will need to have positive community and economic benefits.

Each university community will develop a plan for the types of businesses it intends to attract and the locations that will be tax-free. For SUNY community colleges and four-year colleges and universities, these locations may include vacant land or space in buildings on the SUNY campus; business incubators “with a bona fide affiliation to the campus, university or college”; and up to 200,000 square feet within a mile of the SUNY campus.

An additional 3 million square feet of commercial space will be available at designated private colleges north of Westchester County and up to twenty strategic state assets will also be designated tax-free. These sites will be identified by a three-person START-UP NY program board.

Certain restrictions apply: for example, companies will not be able to simply shift workers from another location to a START-UP NY site, and the state will retain the right to reduce, suspend, or terminate benefits if companies fail to live up to their commitments to create new jobs.

⁴ For the second five years, employees would pay no taxes on income up to \$200,000 of wages for individuals, \$250,000 for a head of household, and \$300,000 for taxpayers filing a joint return.



Incentives Offered in Broome County

Southern Tier Regional Economic Development Council (REDC)

With funding from Empire State Development, the Southern Tier REDC has established three regional initiatives: the Rural Initiative Venture Fund, Community Revitalization Program, and Infrastructure Fund for Shovel-Ready Sites.

- The **Rural Initiative Venture Fund** is a grant and revolving loan fund that provides start-up and expansion capital to agricultural businesses. The program supports the REDC's strategy to build the rural-based economy of the Southern Tier.
- The **Community Revitalization Program** is a loan/grant fund that provides "gap" financing for projects that utilize a collaborative approach to improving diverse downtowns, mixed use options, and commercial and retail opportunities. It is expected to leverage millions of dollars in private investment in downtown cores and community centers.
- The **Regional Infrastructure Fund for Shovel Ready Sites** is designed to increase the region's capacity for business development and promote the redevelopment of brownfield sites. Emphasis is placed on smart growth and energy efficient site development. The Fund provides loans to establish infrastructure for new shovel ready sites.

Proceeds of the three loan programs will be used to seed future projects, leveraging millions of dollars in additional private investment.

Broome County IDA

The Broome County Industrial Development Agency (BCIDA) is a public benefit corporation chartered by the State of New York. It offers a variety of tax incentives and financing programs for businesses, including:

- **Tax Exempt Industrial Development Bonds:** Manufacturing-related expansion projects that anticipate fixed asset financing over \$1 million can take advantage of tax-exempt industrial development bonds to secure sub-prime loans for real estate and equipment. Features include real property tax abatements, state and local sales tax abatements, and a mortgage recording tax exemption.
- **Taxable Industrial Development Bonds:** Manufacturing, industrial and some commercial projects in Broome County can receive considerable benefits by using this tool for fixed asset related expansion projects. Many non-retail uses are permitted. The interest from the bonds is exempt from NYS income tax but is fully subject to federal taxation. Features include real property tax abatements, state and local sales tax abatements, and a mortgage recording tax exemption. Real estate and equipment loans are offered at or near conventional rates.
- **Sale/Leaseback Transactions:** Even in instances in which the BCIDA is not involved in issuing industrial development bonds, it can offer real property tax abatements through the development of a simple



sale/leaseback agreement with the project sponsor. In 2012, for example, the BCIDA approved a sale/leaseback and payment-in-lieu-of-taxes (PILOT) agreement with Maines Paper & Food Service, Inc., to add 20,000 square feet to its Conklin distribution center for Darden Restaurants, Inc.

- **Southern Tier East Economic Development Revolving Loan Fund Program (STEED):** The STEED RLF program assists start-up and existing firms in an eight-county region by offering low-interest financial support for the purchase of fixed capital assets or working capital. Eligible businesses may finance up to 40% of a project's cost up to a maximum of \$200,000. The successful applicant must be able to document that the planned project will result in job creation and/or retention. Other eligibility criteria apply.
- **Title IX Economic Adjustment Revolving Loan Fund Program:** The Title IX Program assists start-up and existing firms in Broome County by offering low-interest financial support for the purchase of fixed capital assets or working capital. Eligible businesses may finance up to 40% of a project's cost up to a maximum of \$200,000. The successful applicant must be able to document that the planned project will result in job creation and/or retention. Other eligibility criteria apply.

Based on its most recent report to the Office of the State Comptroller (OSC), the BCIDA in 2010:

- Supported 42 projects valued at \$456.5 million⁵; and
- Provided \$6,966,814 in total tax exemptions, which were offset by \$3,418,965 in PILOTs, resulting in net tax exemptions of \$3,547,849.⁶

These BCIDA projects reported a total of 4,375 full-time equivalent positions, which reflects an increase of 1,060 jobs from the commencement of the projects, at an average cost of \$3,346 per job gained.

Binghamton Local Development Corporation

The Binghamton Local Development Corporation (LDC) is a public benefit corporation created under state law to implement and support the City's economic development strategy, in conjunction with the Binghamton Economic Development Office, through loan programs, business initiatives and outreach efforts. BLDC loan programs include:

- **Revolving Loans** are available to businesses for up to 40% of the total project cost or a maximum of \$250,000, whichever is less; terms to match the security or collateral.
- **Microenterprise Loans** are available to businesses with five or fewer employees, one of whom must be the owner, for the purchase of fixed assets, inventory and working capital; up to \$24,000 with a maximum five-year term.
- To improve the overall "curb appeal" of the City's commercial districts, the **Commercial Facade Improvement Program** provides financial assistance to local businesses to upgrade and restore building

⁵ Total project value includes all aspects of the project, including those components that may not directly benefit from IDA assistance.

⁶ OSC, http://www.osc.state.ny.us/localgov/pubs/research/ida_reports/2013/IDAProjectDataSummary2011.xlsx.



facades, roofs, doors, and windows. Funding is available for up to 75% of the total project cost to a maximum of \$100,000, with a maximum seven-year term.

Eligible businesses must be located in or relocating to the City of Binghamton, able to create jobs for low to moderate income persons, and able to provide at least 10% owner equity in the project. In 2012, the Binghamton LDC made six loans totaling \$594,050.

Town of Union Local Development Corporation

The Town of Union Local Development Corporation (LDC) offers financial assistance to start-up and expanding businesses. Most LDC programs are intended to create and retain permanent jobs, and to supplement rather than replace financing from private lenders. These programs include:

- **Town of Union Business Assistance (TUBA) Program:** Loans for the purchase of fixed assets with a useful life of at least five years; financing for up to 40% of total project costs, generally not to exceed \$200,000. At least 50% of the project cost must be funded privately. Funding is based on the number of jobs to be created within two or three years of the loan approval. Start-up businesses are eligible for funding, but additional requirements must be met.
- **Emerging Enterprise/Emerging Market Entrepreneurial (E³):** Loans to encourage research and development in emerging fields and/or improve upon existing technologies; financing of fixed assets for up to 75% of eligible projects, generally not to exceed \$50,000. At least 60% of the project cost must be funded privately. Funding is based on the number of jobs to be created within two or three years of the loan approval. Start-up businesses are eligible for funding, but additional requirements must be met.
- **Microenterprise Loan Program:** Loans to start-up or existing businesses with five (5) or fewer employees that may not be able to be approved for a loan through traditional means of financing without the use of public funds; financing for up to 75% of eligible projects, not to exceed \$20,000. At least 25% of the project cost must be funded privately. Funding is based on the number of jobs to be created within two years of the loan approval.
- **Central Business District (CBD) Loan Program:** For the purchase of land and buildings in business districts in the Town of Union, Village of Endicott, and Village of Johnson City where 51% or more of the building will be used for commercial purposes; financing for up to 40% of eligible project costs, generally not to exceed \$50,000. At least 75% of the project cost must be funded privately. Funding is based on the number of jobs to be created within two or three years of the loan approval. Start-up businesses are eligible for funding, but additional requirements must be met.
- **Commercial Façade Loan Program:** For the revitalization of building facades on commercial structures; financing for up to 50% of eligible projects, generally not to exceed \$10,000. Open only to the owners of commercial property in business districts in the Town of Union, Village of Endicott, and Village of Johnson City.



Other Resources

- **Greater Binghamton SCORE** provides free and confidential business counseling tailored to meet the needs of the small business or prospective entrepreneur. SCORE volunteers are real-world professionals, often retirees, who donate thousands of hours to helping small businesses succeed.
- **The Small Business Development Center** at Binghamton University provides management and technical assistance to small businesses in a seven-county area. One-on-one assistance is offered on a wide range of topics, including business plan development, accounting and financial projections, marketing, sources of financing, etc.
- The **Entrepreneurial Assistance Program (EAP)** is a program offered at Broome Community College that provides instruction, training, technical assistance, and support services to both existing and prospective entrepreneurs. Students participate in a ten-week class that teaches them how to develop a business plan. In partnership with the Binghamton LDC, the EAP co-sponsors an annual business plan competition. In 2013, the contest winner received a \$5,000 grant, a \$5,000 advertising package from the *Press & Sun Bulletin*, a one-year membership in the Greater Binghamton Chamber of Commerce, and a professional consultation for website design and Internet marketing.



E. The Cost of Doing Business in Broome County

Labor Costs

Labor costs in the Binghamton MSA are competitive compared with other locations in New York State and Pennsylvania. This is particularly important for large and mid-sized operations considering Broome County. Table 3 below provides a labor cost comparison for selected key occupations.

Table 3: Annual Median Wages for Selected Occupations by MSA

Occupation	Binghamton MSA	Albany-Schenectady-Troy MSA	Scranton, PA MSA	Williamsport PA MSA	Allentown-Bethlehem-Easton PA-NJ MSA
Management, Business, and Finance					
General and operations managers	\$80,840	\$92,310	\$80,230	\$80,740	\$91,440
Industrial production managers	\$82,850	\$103,720	\$74,310	\$98,330	\$92,940
Computer and information systems mgrs	\$96,100	\$108,990	\$105,700	\$96,650	\$103,380
Financial managers	\$106,920	\$106,050	\$85,420	\$66,590	\$106,080
Administrative services managers	\$94,940	\$87,410	\$79,010	\$68,240	\$89,180
Medical and health services managers	\$63,620	\$91,050	\$71,000	\$73,120	\$86,230
Business operations specialists	\$64,580	\$66,030	\$55,350	\$46,600	\$63,300
Accountants and auditors	\$57,370	\$64,600	\$51,030	\$52,920	\$51,070
Claims adjusters, examiners, and investigators	\$66,800	\$60,720	\$58,390	NA	\$59,780
Management analysts	\$58,310	\$70,000	\$72,320	NA	\$84,230
Computer & Engineering					
Computer systems analysts	\$64,640	\$73,520	\$76,170	\$90,990	\$77,060
Software developers, systems software	\$87,840	\$81,850	\$72,260	\$85,130	\$105,640
Electrical engineers	\$85,900	\$99,960	\$75,190	NA	\$74,600
Industrial engineers	\$53,830	\$94,360	\$73,770	\$75,510	\$86,220
Mechanical engineers	\$71,580	\$83,580	\$63,130	\$66,330	\$81,130
Electrical/electronic engineering technicians	\$61,410	\$61,200	\$62,180	\$37,030	\$62,180
Health Care					
Registered nurses	\$53,500	\$58,210	\$57,050	\$59,310	\$66,690
Licensed practical nurses	\$36,710	\$38,810	\$41,690	\$41,780	\$42,550
Physicians assistants	\$91,240	\$88,450	\$69,250	\$79,860	\$80,900
Pharmacists	\$115,450	\$114,820	\$106,860	\$102,060	\$110,850
Medical and clinical lab technologists	\$65,270	\$56,950	\$53,510	NA	\$54,850
Home health aides	\$23,980	\$23,150	\$21,120	\$20,150	\$19,450
Office & Administrative Support					
Sales representatives, wholesale/mfg., non-technical	\$44,980	\$55,980	\$49,360	\$52,810	\$58,890
Stock clerks and order fillers	\$19,590	\$22,550	\$23,860	\$22,000	\$22,240
Bill and account collectors	\$28,770	\$36,030	\$31,410	\$26,540	\$28,690
Executive secretaries and admin. assistants	\$56,180	\$56,560	\$42,570	\$37,480	\$46,880
Receptionists	\$22,050	\$27,950	\$23,440	\$23,550	\$24,480
Customer service representatives	\$29,550	\$32,310	\$28,740	\$28,220	\$30,060
General office clerks	\$23,420	\$29,260	\$26,200	\$28,200	\$28,080



Table 3: Annual Median Wages for Selected Occupations by MSA

Occupation	Binghamton MSA	Albany-Schenectady-Troy MSA	Scranton, PA MSA	Williamsport PA MSA	Allentown-Bethlehem-Easton PA-NJ MSA
Shipping and receiving clerks	\$28,410	\$30,270	\$30,170	\$28,970	\$30,850
Production & Transportation					
Sheet metal workers	\$33,750	\$56,610	\$48,440	\$31,470	\$68,650
Industrial machinery mechanics	\$49,890	\$52,900	\$40,940	\$43,300	\$51,250
Production supervisors	\$47,370	\$62,970	\$52,710	\$51,900	\$59,680
Team assemblers	\$24,300	\$23,690	\$24,590	\$25,530	\$28,920
Food batchmakers	\$34,150	\$33,190	\$22,470	\$41,390	\$32,530
Bakers	\$26,360	\$24,810	\$23,520	\$22,720	\$25,290
Computer-controlled machine tool operators	\$29,790	\$35,370	\$33,700	\$36,010	\$35,300
Machinists	\$34,200	\$45,580	\$38,540	\$41,250	\$41,770
Welders, cutters, solderers	\$29,280	\$44,810	\$34,560	\$30,620	\$37,030
Inspectors and testers	\$29,900	\$41,060	\$33,500	\$32,550	\$36,600
Heavy/tractor-trailer truck drivers	\$42,660	\$41,050	\$36,200	\$37,720	\$39,970
Industrial truck and tractor operators	\$29,390	\$35,440	\$31,740	\$35,010	\$32,210
Packers and packagers, hand	\$21,330	\$22,200	\$22,000	\$20,600	\$25,320
Laborers and freight movers	\$24,010	\$29,830	\$28,620	\$24,410	\$27,230

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2012. Occupations in which annual median wages are lowest in the Binghamton MSA are highlighted in green.

State and Local Taxes

A key aspect of the cost of doing business is taxes. In the Tax Foundation's 2013 version of its State Business Tax Climate Index – which considers corporate, income, unemployment insurance, and sales tax rates as well as property taxes – New York ranked last. According to the Tax Foundation's report: “Despite moderate corporate taxes, New York scores at the bottom this year by having the worst individual income tax, the sixth-worst unemployment insurance taxes, and the sixth-worst property taxes” in the nation.⁷

Table 4: 2013 Business Tax Climate Index Ranks and Component Tax Ranks

State	Overall Rank	Corporate Tax Rank	Individual Income Tax Rank	Unemployment Insurance Tax Rank
New York	50	23	50	45
Pennsylvania	19	46	12	36
New Jersey	49	40	48	24
Massachusetts	22	33	15	49
Virginia	27	6	38	38

Source: Tax Foundation. Report shows tax systems as of July 1, 2012 (the beginning of Fiscal Year 2013).

Note: A rank of 1 is more favorable for business than a rank of 50. Rankings do not average to total.

⁷ Tax Foundation. 2013 State Business Tax Climate Index. October 2012. <http://taxfoundation.org/article/2013-state-business-tax-climate-index> The corporate tax rates are 7.1% in New York State and 9.99% in Pennsylvania.



Property tax rates in the State of New York are among the highest in the United States. In a county-by-county analysis of median property taxes paid on homes, Broome ranked #230 out of 806 counties included. Broome County ranked #26, however, in terms of property taxes as a percent of median home value, and #109 in property taxes as a percent of median household income. Comparisons between Broome County and other counties in New York and Pennsylvania are shown in **Table 5** below (note differences in rank order).

Table 5: Property Taxes on Owner-Occupied Housing – Ranked by Total Tax Paid, 2010

County	Median Property Taxes Paid on Homes	Taxes as a Percent of Median Home Value		Taxes as a Percent of Median Household Income	
	Rank	Amt.	Rank	Amt.	Rank
Broome, NY	230	2.36%	26	4.59%	109
Lackawanna, PA	349	1.37%	248	3.56%	277
Lehigh, PA	138	1.50%	205	4.65%	103
Lycoming, PA	404	1.39%	243	3.63%	264
Albany, NY	80	1.83%	120	4.96%	82
Schenectady, NY	55	2.61%	12	6.65%	33
Tompkins, NY	81	2.30%	34	5.51%	55
U.S. Average	-	1.14%	-	3.25%	-

Source: Tax Foundation. Note: In this table, a rank of 1 is *least* favorable – i.e., the total tax paid is highest in the county ranked #1. A total of 806 U.S. counties was included in the analysis.

Information on other Southern Tier counties is provided in the appendix to this chapter.

An online property tax database created by the Empire Center for New York State Policy calculates the combined tax rate for every school district and local governments in the state. The database can be used to calculate the “effective” tax rate in a given locality or compare property tax burdens between municipalities.

Based on this information, real estate property taxes in Broome County in 2012 ranged from approximately \$23 per \$1,000 of assessed value to \$52 per \$1,000, with an average of \$32. The lowest effective tax rate was for property located in the Town of Fenton and the Harpursville School District. Property located in the City of Binghamton and the Binghamton School District had the highest effective tax rate not only in Broome County, but in the entire Southern Tier region. Effective tax rates were also much higher than average in the villages of Johnson City and Endicott.



Utility Costs

According to the U.S. Energy Information Administration, the average retail price of electricity in New York is 14.74 cents per kilowatt-hour (kWh) for commercial users and 6.56 cents per kWh for industrial users (**Table 6**).⁸ Discussions with small- to mid-sized industrial users indicate that the bundled rate (generation/transmission) in Broome County is between 10 and 15 cents per kWh.

Typically for large energy users in the region, NYSEG offers incentives in the form of rate discounts and funding assistance. Large energy users can also take advantage of the state's Recharge New York program.

Table 6: Average Retail Price of Electricity to Ultimate Customers by End-Use Sector (Cents Per Kilowatt-Hour)

	Commercial	Industrial
New York	14.74	6.56
Pennsylvania	9.34	6.98
New Jersey	12.08	10.16
Massachusetts	15.09	13.13
Virginia	7.88	6.53
U.S. Average	9.99	6.59

Source: U.S. Energy Information Administration, March 2013.

Cost of Living

Overall, the cost of living in Binghamton is on par with the national average (**Table 7**). Housing costs in particular are well below average, although the same is true of potential competitors in eastern and central Pennsylvania. On the negative side, utility and health care costs in Binghamton and other Southern Tier communities are considerably higher than average.

Table 7: Cost of Living in Selected Locations

	Overall Index	Food	Housing	Utilities	Health	Transportation	Misc.
Binghamton, NY	101	110	69	124	113	108	113
Ithaca, NY	108	101	122	114	110	106	98
Albany, NY	106	108	100	102	106	103	114
Schenectady, NY	97	107	67	104	105	102	114
Scranton, PA	87	103	52	108	93	101	100
Williamsport, PA	90	89	70	125	97	96	94
Allentown, PA	93	102	66	114	103	101	104

Source: Sperling's Best Places Cost of Living Calculator. U.S. Index = 100.

Misc. category includes clothing, restaurants, repairs, entertainment, and other services.

⁸ The average retail price represents the cost per unit of electricity sold and is calculated by dividing retail electric revenue by the corresponding sales of electricity. The electric revenue used to calculate the average retail price is the operating revenue reported by the utility companies. Electric utilities operating revenues include energy charges, demand charges, consumer service charges, environmental surcharges, and fuel adjustments, as well as state and federal taxes.



Commercial and Industrial Real Estate

Real estate costs in Broome County are very competitive (less than \$50,000 per acre for developed industrial sites). As reflected in the Real Estate Assessment, as of Q4 2012 the average asking price for industrial space in the Binghamton area was \$4.90/SF, according to Cushman & Wakefield; for office space, it was \$12.24/SF. In comparison, asking prices for industrial space averaged about \$4.50/SF in the Lehigh Valley and \$5.50/SF in the Capital Region. The average asking price for office space was about \$14+/SF in the Lehigh Valley and \$15+/SF in the Capital Region.



Summary Observations

Generally speaking, local, regional, and state incentives seem to be adequate for most types of businesses, and major employers in Broome County are taking advantage of them. Financial resources for the purchase of fixed assets, inventory, and working capital are offered by multiple agencies, typically at competitive rates.

The extent to which incentives can attract companies from outside Broome County, however, may be limited. New York is perceived by many companies and site selectors as a high-cost state, effectively eliminating it from consideration.⁹ Although corporate tax rates are in fact higher in Pennsylvania,¹⁰ the Allentown (Lehigh Valley) and Scranton areas are considered strong competitors. These areas have large inventories of sites and buildings suitable for various industrial and commercial uses, and can offer aggressive leasing packages. As a result, Allentown and Scranton have landed numerous production, distribution, and back-office projects over the last decade. Most recently, Flowserve – a Texas-based manufacturer and supplier of pumps, valves, seals, automation, and services to the oil and gas industries – announced plans to relocate a portion of its pump division operations to the Lehigh Valley.¹¹

On the plus side, Broome County does have advantages in terms of both labor and land costs. It has access to interstate highway networks, and the quality of skilled labor resources is considered very good. Broome County is far less competitive in terms of energy costs and property taxes (absent incentives). This can be a problem in attracting businesses and recruiting talent to the area, especially from other technology centers in the southern United States. However, property taxes may not be an issue for a company that leases space; similarly, businesses that do not consume large amounts of energy may not be concerned about high utility rates.

For energy intensive businesses, the state's Recharge NY Power Program can provide competitive, stable electric power prices. However, the program does have a competitive application process, so access to this incentive is not guaranteed. Companies may also be able to obtain rate reductions with NYSEG, though the amount and duration of any discounts are subject to negotiation. Some companies, like Frito-Lay, purchase their electricity off the grid from NYSEG, resulting in cheaper rates.

It appears that there are programs in place in Broome County to help young, entrepreneurial companies access working capital and to assist large, often mature employers reduce operating costs (i.e., through property tax abatements). Small and mid-sized companies of up to 200 employees that are no longer eligible for start-up assistance but cannot meet the job creation requirements of programs accessible to major employers are probably most at-risk. This could include the "next generation" companies that

⁹ Location selection is a process of elimination. Usually it starts with a relatively large number of candidates and proceeds through a series of steps designed to screen locations based on defined criteria: e.g., geography, access to labor, costs, available real estate options, or other resource requirements. Incentives typically do not come into play until later in the process, *after* the top candidates have been selected and companies are comparing specific sites. If New York or Broome County are eliminated from consideration early in the process, the availability of incentives is essentially a moot point.

¹⁰ Pennsylvania Governor Tom Corbett has called on the General Assembly to reduce Pennsylvania's corporate income tax from 9.99% to 6.99% by 2025.

¹¹ "Governor Corbett: Out-of-State Manufacturer to Relocate to the Lehigh Valley; Create 124 Jobs," *Herald Online*, June 12, 2013. www.heraldonline.com/2013/06/12/4940472/governor-corbett-out-of-state.html



Broome County Comprehensive Plan

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emerge from BU's new high-tech incubator. Often the leaders of such companies are not aware of incentive programs, including training grants, for which they can qualify. The establishment of a formal business outreach program with regularly scheduled visits to identify needs and determine how economic development officials can assist would be helpful.



Appendix – Incentive Evaluation

Table 5B below compares Broome County to other counties in the Southern Tier with regard to median property taxes paid on owner-occupied housing, based on an analysis by the Tax Foundation. Because information was not available for several counties due to insufficient sample sizes, **Table 5C** provides a similar comparison using five-year averages for 2005-2009.

**Table 5B: Property Taxes on Owner-Occupied Housing –
Ranked by Total Tax Paid, 2010**

County	Median Property Taxes Paid on Homes	Taxes as a Percent of Median Home Value		Taxes as a Percent of Median Household Income	
	Rank	Amt.	Rank	Amt.	Rank
Broome, NY	230	2.36%	26	4.59%	109
Chemung, NY	264	2.54%	15	3.99%	194
Chenango, NY	NA	NA	NA	NA	NA
Delaware, NY	NA	NA	NA	NA	NA
Schuyler, NY	NA	NA	NA	NA	NA
Steuben, NY	272	2.69%	10	4.19%	168
Tioga, NY	NA	NA	NA	NA	NA
Tompkins, NY	81	2.30%	34	5.51%	55
U.S. Average	-	1.14%	-	3.25%	-

Source: Tax Foundation. Note: In this table, a rank of 1 is *least* favorable – i.e., the total tax paid is highest in the county ranked #1. A total of 806 U.S. counties was included in the analysis.

**Table 5C: Property Taxes on Owner-Occupied Housing –
Ranked by Total Tax Paid, 2005-2009 Five-Year Averages**

County	Median Property Taxes Paid on Homes	Taxes as a Percent of Median Home Value		Taxes as a Percent of Median Household Income	
	Rank	Amt.	Rank	Amt.	Rank
Broome, NY	314	2.29%	27	3.88%	212
Chemung, NY	385	2.36%	20	3.68%	262
Chenango, NY	468	2.15%	40	3.59%	289
Delaware, NY	471	1.44%	466	3.64%	273
Schuyler, NY	516	2.03%	54	3.48%	319
Steuben, NY	437	2.37%	19	3.68%	263
Tioga, NY	343	2.19%	35	3.64%	274
Tompkins, NY	103	2.17%	37	4.71%	80
U.S. Average	-	1.14%	-	3.25%	-

Source: Tax Foundation. Note: In this table, a rank of 1 is *least* favorable – i.e., the total tax paid is highest in the county ranked #1. A total of 2,922 U.S. counties was included in the analysis.



Economic Development Recommendations

Introduction

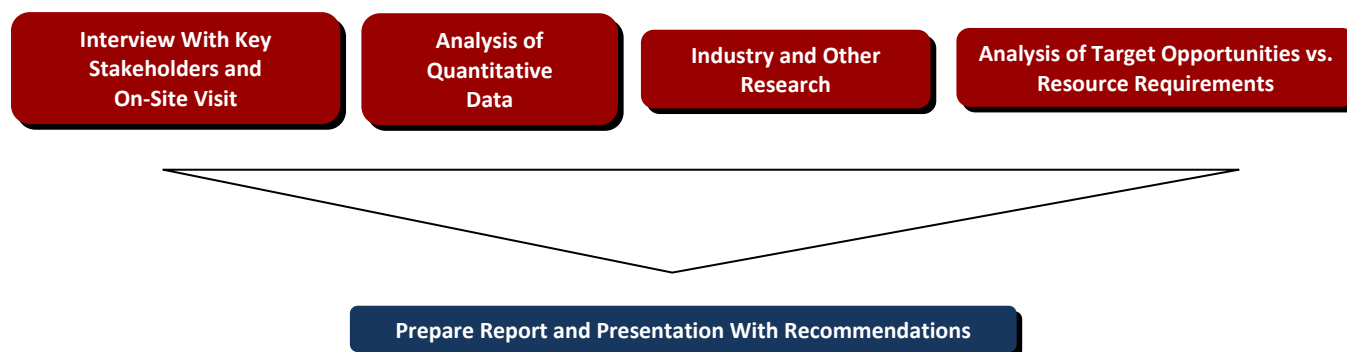
Broome County contracted with E.M. Pemrick and Company to prepare the Economic Analysis Component of the County's Comprehensive Plan. The analysis is intended to update portions of a countywide economic development strategy, adopted in 2002, known as the *BCPlan*. Elements of the scope of work for the Economic Analysis included an economic profile of Broome County, a profile of the local workforce, a real estate assessment, a target industry analysis, and an incentive evaluation.

Project Deliverables and Objectives	
Economic Profile	<ul style="list-style-type: none"> Assess current economic base, industry composition, and local/regional economic trends. Identify employment concentrations and growth industries.
Workforce Profile	<ul style="list-style-type: none"> Assess the existing and potential workforce. Analyze workforce commutation patterns and employment dynamics. Identify education and training resources.
Real Estate Assessment	<ul style="list-style-type: none"> Evaluate sites and buildings currently available for development or redevelopment. Identify gaps in Broome County's real estate portfolio.
Target Industry Analysis	<ul style="list-style-type: none"> Evaluate potential target industries for recruitment and expansion. Identify opportunities for economic growth and resources required by specific industries.
Incentive Evaluation	<ul style="list-style-type: none"> Review and assess local, regional, and state incentives to promote local economic growth. Evaluate the cost of doing business locally against peer locations.

This introduction is intended to provide a brief summary of each of the five deliverables as background for the recommendations that follow. More detailed information can be found in the sections listed above.

Planning Process

The process used to prepare the Economic Analysis is summarized in the chart below.





The project team interviewed or consulted with business leaders, government officials, economic development and workforce development professionals, college and university representatives, and other stakeholders in Broome County. They included:

- Binghamton University
- Broome Community College
- Broome County Department of Planning and Economic Development
- Broome County Industrial Development Agency
- BAE Systems
- City of Binghamton
- Jeff Davis, Health Care Consultant
- Delta Engineers
- Empire State Development, Southern Tier Regional Office
- Endicott Interconnect Technologies
- Greater Binghamton Chamber of Commerce
- Hinman Howard and Kattel
- Huron Real Estate
- Johnson Outdoors
- Lockheed Martin
- Lourdes Hospital
- MATCO Electric Company
- NYS Department of Labor
- NYSEG
- Newman Development
- Security Mutual Insurance Company
- Town of Union

The project team compiled and assessed quantitative data from multiple sources; evaluated economic development resources including labor, real estate, education and training, utilities, and incentives; and conducted in-depth research to understand market trends impacting the future growth of potential target industries.

Perspective on the Local Economy

The historic development of the Broome County economy can be attributed in part to the success of a handful of talented entrepreneurs and inventors. Through the completion of the Chenango Canal connecting Binghamton with the Erie Canal in 1837 and the development of the railroad a few years later, businesses in the County took advantage of access to major markets, distributing such products as shoes and cigars, as well as a variety of agricultural products. As the local population grew, a hospital was established in the City of Binghamton and other services soon followed.

Broome County became a hotbed of innovation in the 20th century. The computer and electronics industry started with the Bundy Manufacturing Company, which became International Business Machines (IBM) in the 1920s. The company continued to expand in Endicott and eventually opened facilities around the world. The flight simulation industry was first developed in the County by Edwin Link with the introduction of the first flight trainer in 1929. Innovations were also introduced by such companies as General Electric and Lockheed Martin. The tradition of innovation in the area is reflected in the R&D activity at Binghamton University and in the patenting activity that continues today.

Currently, the largest employers in Broome County include local and state government, educational institutions, hospitals and other service providers, manufacturing and distribution companies, wholesalers, retailers, banks, and insurance businesses. Although Binghamton University has nearly 5,500 employees and

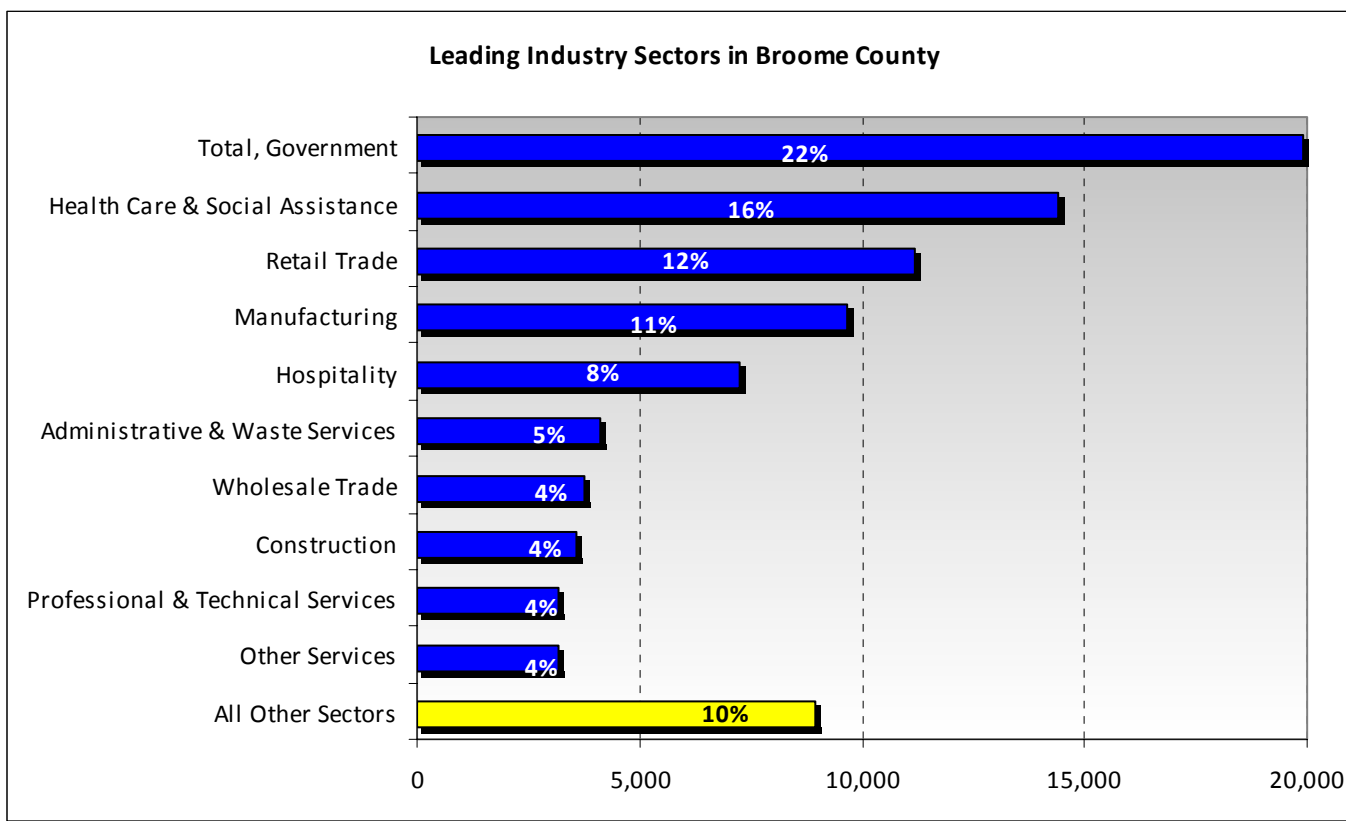


about a dozen companies have 1,000 or more employees, approximately 95% of the private establishments in the County have less than 50 employees.

Over the last two decades, employment levels in the Binghamton MSA have declined precipitously. Between 1990 and 2011, the region experienced a net loss of more than 10,000 jobs. Nowhere is this decline more apparent than with respect to the manufacturing sector: In 1990, 28.6% of the private sector employment in the Binghamton MSA was in manufacturing; by 2011, the share had declined to 12.6%.

In contrast, employment in the service sector increased by 7,300, or 12.4%. Education and health services led the net gain in Binghamton MSA employment, adding 3,700 jobs between 1990 and 2011. However, it was not nearly enough to make up for the losses in higher-paying manufacturing jobs.

After government, the largest industry sector in Broome County is health care and social assistance, with 16% of total employment. Retail is the next largest sector, followed by manufacturing, with 11%. Within the manufacturing sector, computer and electronics manufacturing accounts for the largest number of jobs. In fact, 7% of the state's nearly 62,000 computer and electronics manufacturing jobs are in Broome County, while 13% are in the Binghamton metro area.



A *location quotient* (LQ) is a simple tool used to measure industry specialization, using the U.S. as a benchmark. It is essentially a ratio that compares an industry's share of total employment in a region to the national share. A value of 1.00 demonstrates that the share of employment in a particular industry is roughly



the same both locally and nationally. An LQ *greater* than 1.00 indicates that the local area is more specialized in that industry relative to the U.S.; it suggests an export industry that brings income into the region. As a rule of thumb, location quotients of between 0.80 and 1.20 are not considered significantly different from 1.00.¹

The table at right presents location quotients for selected industries and industry sectors. As the table indicates, only two industry sectors in Broome County have LQs that exceed 1.20: manufacturing and health care. The County has high levels of employment concentration relative to the nation in the production of computers and electronic products, electrical equipment, and fabricated metal products. Local employment is also more concentrated than the nation with respect to hospitals, wholesale trade in nondurable goods (e.g., grocery products), and nursing and residential care facilities.

Selected Location Quotients by Industry, Broome County			
Description	LQ	Jobs	Avg. Wages
Manufacturing	1.28	9,678	\$58,789
Food Mfg	0.90	847	\$44,178
Fabricated Metal Product Mfg	1.32	1,148	\$39,351
Machinery Mfg	1.01	692	\$66,426
Computer and Electronic Product Mfg	6.35	4,532	\$75,569
Electrical Equipment Mfg	3.38	795	\$37,381
Wholesale Trade	1.04	3,746	\$45,027
Merchant Wholesalers Nondurable Goods	1.65	2,067	\$45,934
Health Care and Social Assistance	1.40	14,389	\$41,360
Ambulatory Health Care Services	0.93	3,687	\$57,652
Hospitals	1.86	5,613	\$45,560
Nursing and Residential Care Facilities	1.33	2,719	\$27,071

Source: U.S. Bureau of Labor Statistics, QCEW, and E.M. Pemrick and Company.

Notably, some of these industries pay annual wages that are higher than the Broome County average of about \$37,000. Because they serve as a source of high-paying jobs, they contribute disproportionately to the County economy whether or not they are the largest employers. This highlights the importance of retaining manufacturing employers and other types of businesses that pay high wages.

Another industry that serves as a source of high-wage employment locally is professional, scientific, and technical services (average annual wages are \$47,104). Nationally, professional services is one of the fastest-growing segments of the economy. In Broome County, most of the jobs in this sector are in computer systems design, architectural and engineering services, legal services, and accounting and bookkeeping.

Perspective on the Workforce

Broome County is a net importer of labor: more people commute *into* the County than *leave* the county for employment. More than two-thirds of those who work in Broome County live within the Binghamton MSA. Many workers travel from other metropolitan areas in upstate New York, including Syracuse, Albany-Schenectady-Troy, Rochester, and Buffalo-Niagara Falls. Approximately 5% of the local labor force is drawn from Pennsylvania, mostly from Susquehanna County to the south.

¹ More information on location quotients, including their shortcomings, can be found in the Economic Profile.



Broome County Comprehensive Plan

Building our Future

The decennial census shows that Broome County had 200,600 residents in 2010, with little change from 2000. Most surrounding counties also experienced stagnant or declining population levels. In general, the population trends of the last decade are projected to continue through at least 2020.

The prime working age population is considered to be the 25-54 age group; this is when the likelihood of labor force participation is highest. Of those living in Broome County in 2010, nearly 38% were between the ages of 25 and 54. Compared to New York State and the U.S. as a whole, Broome County has a lower proportion of residents between the ages of 25 and 54, and higher proportions of residents ages 55-64 and 65 and over.

Over the next ten years, the aging of the population will continue to have a dramatic impact on the size and composition of the workforce. With limited growth expected in Broome County, the working-age population will begin to comprise a smaller share of the population, as people now in the 55-64 age cohort start to retire.

Educational attainment levels in Broome County reflect, in part, the presence of a large state university center and a community college. According to the Census Bureau, 89% of County residents age 25 and older have at least a high school diploma or its equivalent and 26% have a bachelor's degree or higher. Nearly 12% have a graduate or professional degree. Among Broome County residents between the ages of 25 and 34, the proportion of the population with a four-year, graduate, or professional degree is more than 30%, and among those ages 35 to 44, it is 27.9%.

Compared to the U.S. as a whole, the Southern Tier has a higher concentration of its workforce in education, training, and library occupations; architecture and engineering; community and social services; and health care practitioners and technicians. Although engineers are employed by a broad spectrum of industries, many of these occupations are associated with key sectors of the economy, such as education and health care.

A recent report by the NYS Department of Labor on science and engineering (S&E) jobs found that the share of the regional workforce engaged in S&E occupations is highest in the Southern Tier. The Southern Tier workforce also has the highest proportion of engineers, physical scientists, and mathematical scientists than any other region. As the report noted: "S&E workers... help increase our capacity for innovation in the form of new goods, services, or processes. Moreover, as our economies become more knowledge intensive, workers with the right S&E skills will be in even greater demand." These workers represent a tremendous asset for Broome County and the region.

Based on data from the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) program, the majority of those employed by private establishments in Broome County are of prime working age, between the ages of 25 and 54. The aging of the Baby Boom generation has led to an increase in the proportion of workers age 55 years and older, however. In 2000, 12% of workers in private industry in Broome County were age 55 and over, while nearly 21% are in this age group today.



As shown in the table at right, 16% of workers in private industry in Broome County are 55-64 and 4% are age 65 and over. Industry sectors with higher than average percentages of older workers include manufacturing, finance and insurance, and transportation and warehousing. More than one in four workers employed in the production of computers and electronics, machinery, and fabricated metals is age 55 and over.

Industries with a high proportion of workers approaching retirement age may need to plan for increased recruiting efforts and training programs to address

the loss of older workers and minimize the loss of institutional knowledge. Some job openings may remain vacant, with responsibilities shifted to other employees. Others may need to be filled by workers from other industries who can be retrained. Employers may also look to technology to reduce their reliance on labor.

Perspective on Real Estate

When local companies and businesses looking to establish a facility in the area evaluate real estate, among the factors on which they base their decisions are the *size, physical attributes, and cost* of the building or site; the ability to *secure additional space* or expand; access to *transportation and parking*; and the *availability, reliability, and cost* of utilities, including power, water and sewer, and telecom.

The *readiness* of a site is also critical, as it impacts the time required to get an operation up and running (affecting profitability). A shovel-ready site – one that has undergone all required environmental assessments, archaeological and soils surveys, traffic impact studies, site plan and subdivision approvals, etc. and is pre-permitted – reduces the risks that companies face in completing construction on time and within budget.

The Shovel Ready Sites Program started in New York, and has since been replicated by states that want to attract industry. More than 30 sites across the state have been Shovel-Ready Certified by Empire State Development (and over 100 are under review for Shovel-Ready Certification), but not one of them is in Broome County. Pennsylvania also has numerous sites that are shovel-ready based on similar criteria. This

The Aging Workforce in Broome County

	Pre- and Post-Retirement Age		Total, 55+
	55-64	65-99	
Manufacturing	24.2%	3.1%	27.3%
Computer & Electronic Product Mfg	28.3%	2.5%	30.7%
Machinery Manufacturing	26.6%	1.5%	28.1%
Fabricated Metal Product Mfg	22.6%	5.1%	27.7%
Finance and Insurance	20.6%	5.6%	26.2%
Insurance Carriers & Related Activities	22.5%	6.2%	28.7%
Transportation and Warehousing	18.8%	6.5%	25.3%
Truck Transportation	18.6%	4.8%	23.4%
Health Care and Social Assistance	19.4%	4.7%	24.1%
Ambulatory Health Care Services	19.4%	5.6%	24.9%
Hospitals	21.0%	3.6%	24.6%
Social Assistance	18.8%	6.6%	25.4%
All Private Industry Sectors	16.4%	4.4%	20.8%

Source: U.S. Census Bureau, Local Employment Dynamics Program.
For more information and additional industries, see Workforce Profile.

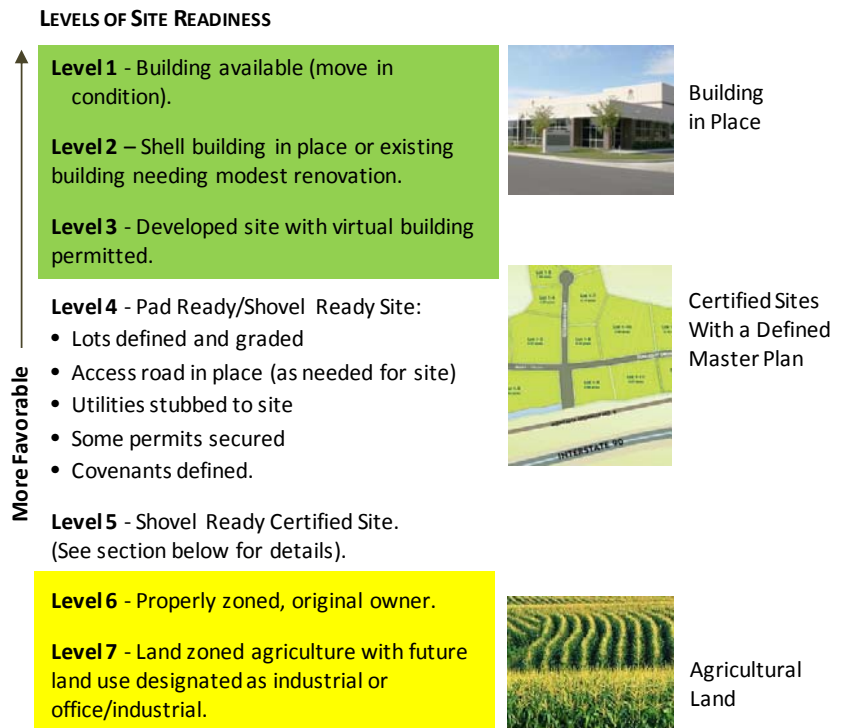


impacts Broome County’s overall competitiveness. Shovel-ready status provides a critical market advantage, as it sends the message that the community wants business growth and is willing to do what it takes to meet the real estate needs of prospective customers.

Smaller companies and those seeking “general space” typically look for available buildings for lease with an option to buy. Larger companies and those with specialized real estate needs will seek to purchase a shovel-ready site to minimize the construction time. Certain types of industries and operations have specific real estate requirements, which are presented in the Real Estate Assessment.

Although Broome County has a good inventory of available industrial buildings to support manufacturing operations, all are over 20 years and less than 20 feet in height. As noted in Cushman & Wakefield’s recent quarterly real estate report: “Market growth [in the Binghamton area] is critically restricted by the lack of availability of newer, functional high bay space...” Few developers are willing to take a risk and construct industrial buildings “on spec”; however, without any newer and appropriately designed product on the market, the chances of attracting businesses that want to lease an industrial building are limited.

A significant amount of office space is available in Broome County, however, at reasonable prices. According to Cushman & Wakefield, the average asking price for office space is about \$12.24 per square foot, reflecting typical rates in a tertiary market. Offices are located both in urban and suburban locations, with access to amenities and the benefit of being near a major university with business, engineering, and other talent as well as part-time labor. This is advantageous in attracting providers of professional and technical services and back office operations.

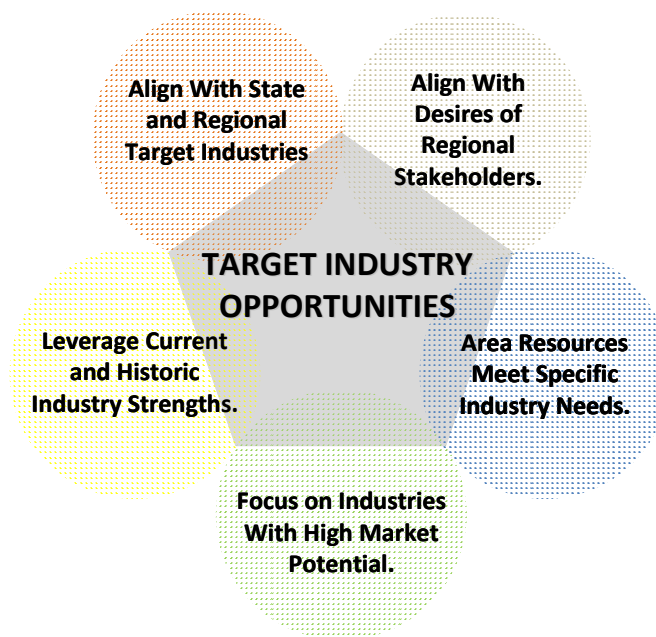




Perspective on Target Industries

The identification of target industries for Broome County considered a number of factors, as summarized in the adjacent diagram. These included:

- The historic presence of any industries to indicate any residual competencies.
- Current employment levels in and location quotients for specific industries and economic segments in the County.
- Market trends impacting the growth of specific industries.
- Industry focus at the state and regional levels.
- The availability of resources (e.g., labor, transportation access, sites and buildings) to support industry needs.



A summary analysis of each target industry, including industry presence in Broome County, overall industry trends, and local potential, begins on the following page. Additional information can be found in the deliverable report, Target Industry Analysis.

Among the trends affecting potential opportunities in the manufacturing sector, in spite of the long-term decline in manufacturing jobs in upstate New York, is reshoring. *Reshoring* is defined as the return of components/parts production and final assembly operations to the U.S. to serve the North American market. Key factors driving these operations back to the U.S. are summarized below.

- | | |
|---|---|
| <ul style="list-style-type: none"> ▪ The cost of fuel is nearly four times what it was in 1995. ▪ Labor, real estate, energy and other costs in China continue to escalate. ▪ Variation in quality... unpredictable, costly, and even dangerous (i.e., with food, children's toys). ▪ Supply chain inventory and pre-pay requirements adding additional costs and cash flow issues. ▪ Reduced product life cycles... smaller runs. | <ul style="list-style-type: none"> ▪ Increased use of technology... concern about protection of patent rights. ▪ More opportunities for automation. ▪ Companies bringing R&D, engineering and production operations closer together. ▪ New strategies to produce goods near markets served. |
|---|---|



Target Industry Analysis Summary			
	Historic/Current Presence	Industry Trends	Local Potential
Health Care Services	<ul style="list-style-type: none"> Significant expansion over last 100+ years with the growth of both private and Catholic-affiliated hospitals and networks. Area has become a regional health care hub. Also includes nursing homes and long-term care facilities, physicians' offices, medical labs, etc. 	<ul style="list-style-type: none"> Impacted by demographics (i.e., aging population), technology, and implementation of the federal Affordable Care Act. Anticipate significant investments in information technology and the way care is offered in the future. 	Moderate.
Education	<ul style="list-style-type: none"> Broome Community College founded 1946, Binghamton University started as Harpur College in 1947; both have continued to grow in enrollment, scope of programs and reputation. 	<ul style="list-style-type: none"> Plans to continue to expand program offerings, student enrollment, and research activity at Binghamton University. Broome Community College to expand as market drives needs and opportunities. 	Moderate to high. R&D may support growth in other segments of the economy.
Manufacturing Electronics (next generation) Fabricated Metal Machinery Food Products Electrical Equipment Plastics/Rubber	<ul style="list-style-type: none"> Strong base of the local economy from the earliest days of the Industrial Revolution due to access to labor, transportation, raw materials and individuals with innovative ideas. Diverse industry sector with multiple employers and industries. Downward trend in employment in most manufacturing segments over last 20+ years, but high wage jobs remain. 	<ul style="list-style-type: none"> Impacted by reshoring of selected manufacturing operations, demand for new food products (e.g., yogurts, locally-grown), commercial aviation/aerospace industry, energy industry activities, and R&D activities at BU and Cornell. 	Low to moderate.



Target Industry Analysis Summary			
	Historic/Current Presence	Industry Trends	Local Potential
Professional & Business Svcs Computer Systems Design Architecture & Engineering Legal Services Accounting/Bookkeeping Management Consulting	<ul style="list-style-type: none"> Government, manufacturing, education, health care, and other sectors have been major sources of demand for services over last 60+ years. Some companies serve a relatively large region, going into PA. Tracks other business activity in the county and region. 	<ul style="list-style-type: none"> Impacted by business growth and economic activity (including large construction projects) in the service area. High-tech business development derived from R&D and shale gas activity may be sources of growth for legal, engineering, other professional services. 	Moderate, if the overall economy grows.
Back Office and Customer Service Operations	<ul style="list-style-type: none"> A limited number of stand-alone back-office and customer service operations; in the past, companies like IBM had back-office functions as part of their operations. NCI plans to add 300 new customer service jobs at its Vestal service center. Access to college students who want to work part-time plus the overall availability and cost of labor are key assets. 	<ul style="list-style-type: none"> A lot of consolidation and fewer back offices being built due to national downturn in financial service sector, but may be opportunities for customer service and collections serving a range of industries (e.g., utilities, telecom). 	Moderate.
Warehousing & Distribution Wholesale Trade Transportation & Warehousing	<ul style="list-style-type: none"> A distribution center since the early days of rail transportation. Broome County is in a strategic location to serve New York and New England markets (though, northeastern PA is a major competitor). Multiple companies that distribute food products, paper, plumbing supplies, commercial equipment, etc. 	<ul style="list-style-type: none"> Impacted mainly by overall population and business growth in the U.S. and in the region to be served. If the state approves drilling of shale deposits for natural gas, it could increase this segment significantly. 	Low to moderate.



Target Industry Analysis Summary			
	Historic/Current Presence	Industry Trends	Local Potential
Data Centers	<ul style="list-style-type: none"> IBM maintained data centers in the area years ago. Several data centers in the Huron Campus, which has the capacity for additional operations. Research on energy efficient data center systems at Binghamton University may be an attraction. 	<ul style="list-style-type: none"> Demand for digital data generation, management and retention continues to expand, and processing speeds and storage capacities continue to be in need. Companies seek locations that minimize the cost of operations while enhancing security. 	Moderate.

Perspective on Incentives

An *incentive* can be defined as any factor (financial or non-financial) that provides a motive for a particular course of action, or counts as a reason for preferring one choice over alternatives. In economic development, incentives may be used to mitigate competitive disadvantages that impact a company's profitability, such as high energy costs or local property taxes. Incentives may also be offered to enhance local resources – for example, training to prepare workers for specific types of jobs, or extending a sewer line to serve an industrial site. Incentives also include grants or loans designed to create, expand, and attract companies and leverage private investment.

In general, local, regional, and state incentives seem to be adequate for most types of businesses. Major employers in Broome County are taking advantage of them. Financial resources for the purchase of fixed assets, inventory, and working capital are offered by multiple agencies, typically at competitive rates. However, there may be a need for financial assistance that does not require significant collateral (e.g., land and buildings) for start-up companies. Another issue is that many grant and loan programs have job creation requirements that are reasonable, but that may be difficult for small companies to fulfill.

The extent to which incentives can attract companies from outside Broome County, however, may be limited. The Allentown (Lehigh Valley) and Scranton areas, for example, are strong competitors. These areas have large inventories of sites and buildings suitable for various industrial and commercial uses, and offer aggressive leasing packages.

On the plus side, Broome County does have advantages in terms of both land and labor costs; annual median wages in the Binghamton area are, in many cases, less than in the Capital Region, the Hudson Valley, or eastern Pennsylvania. Moreover, the quality of skilled labor resources and the responsiveness of college and university officials to business needs are considered very good.



Broome County is less competitive when it comes to energy costs and property taxes (absent incentives). This can be a problem in attracting businesses and recruiting talent to the area, especially from other technology centers in the southern United States. However, property taxes may not be an issue for a company that leases space. Similarly, businesses that do not consume large amounts of energy may not be concerned about utility rates. There are multiple options available to high energy users through the state's Recharge NY Power Program, and NYSEG, as well as the NYS Energy Research and Development Authority (NYSERDA), that can significantly reduce energy costs.

Strengths and Weaknesses

Based on the analysis as well as feedback received during stakeholder interviews, the project team identified Broome County's strengths and challenges with respect to economic development (in no particular order). Some of these may seem intuitive. However, understanding the County's strengths is a necessary first step in defining its competitive advantages, characteristics that can be used to develop talking points to market the area for economic development. Similarly, understanding the challenges that Broome County faces helps to identify issues that should be addressed if possible, as well as inherent disadvantages that affect how the County stacks up relative to competing communities.

Strengths

- Proximity to major markets in upstate New York, the NYC metropolitan area, and New England.
- Geographic access via air, rail, and interstate highways; at the crossroads of I-81 and I-88.
- Diverse manufacturing presence (food products, plastics, metal fabrication, machinery, computers and electronics, electrical equipment, etc.).
- Industrial heritage and technical knowledge... continuing with innovation and patenting activity.
- Binghamton University: emerging as one of the top public universities in the U.S., with strong programs in engineering, business, nursing, and liberal arts.
- University-applied research in electronics and renewable energy.
- University-industry collaboration... close relationships with major employers in the region.
- Broome Community College: strong health sciences and engineering programs; well-regarded and responsive to business needs.
- Competitive labor costs.
- Availability of skilled labor and a strong work ethic (generally).
- Affordable housing and commercial/industrial real estate.
- Excellent health care systems that serve the local and regional population.

Binghamton University and Broome Community College are critical community assets. Both continue to pursue opportunities for growth: BU with the development of high-tech research centers to stimulate innovation and spin-off job creation; BCC with the creation of new facilities to house students from outside the County and accommodate an expanding hospitality program. The two institutions are involved with efforts to construct a high technology incubator in downtown Binghamton and are eager to contribute to Broome County's economic development.



- Abundant water supply.
- Strong agricultural community, new regional farmers market, and land for farming.
- Cultural and recreational opportunities; a growing arts scene.
- Natural gas resources in the Marcellus Shale that underlies the region.

Challenges

- Perceptions and realities of the New York State business environment: high income and property taxes, high level of unionization (albeit driven by government and utility workers).
- High electric power rates, especially relative to the southern U.S., with exceptions in the Village of Endicott and on the Huron Campus, where power is purchased directly “off the grid” at lower rates.
- Low recognition of Broome County and the Southern Tier among businesses and the general public outside the state, making it difficult to attract companies and individuals to the area.
- Too much focus on the economic and industrial losses of the past (“people are so caught up in the past, they can’t see the future”).
- Local media perpetuate a negative view of the region, hurting efforts to promote Broome County as a location for business and a good place to raise a family.
- Aging workforce... relatively high proportion of workers in manufacturing approaching retirement age.
- Educated young people leaving the area.
- Difficulty recruiting workers, especially young professionals, from outside the area; the Greater Binghamton/Broome County region is relatively unknown.
- Issues with wastewater treatment capacity; in areas served by the Binghamton-Johnson City Joint Sewage Treatment Plant, new requirements for sewer connections to reduce infiltration/inflow.
- Lack of sites at a high level of readiness to support business attraction and expansion.
- A lack of industrial buildings under 20 years old with the ceiling heights and column spans that today’s industrial users require.
- Limited developable/accessible land within the County due to wetlands, flood plains, steep slopes, rock outcrops, etc.
- Large supply of former industrial sites or brownfields that require environmental assessment, remediation, and other actions to facilitate redevelopment.



Critical Issues

As a result of the extensive review and analysis of Broome County relative to economic development, the project team identified five (5) critical issues that should be addressed.



Internal and External Communications: Communicating regularly with local businesses on the resources available to expand their operations and soliciting feedback on their needs. Ongoing dialogue with the business community and the public about the progress of economic development activities and resource development. Establishing communications with prospective companies and site selectors regarding the opportunities to locate a business in Broome County. In particular, there is a need for a single, comprehensive economic development web site for the Binghamton area.

Contemporary Real Estate at a High Level of Readiness: Having an inventory of shovel-ready sites and buildings in accessible locations to meet the needs of local and prospective companies and support business attraction and expansion efforts. With limited developable land in Broome County, future growth will depend on maximizing the use of existing industrial sites and redeveloping brownfields. The County needs to



work in partnership with the private sector to assure that appropriate sites and buildings are available.

Addressing Business Needs at Every Stage in Life Cycle: Maintaining a high level of awareness of the resources required at each stage in a company's life cycle (see below). From start-up companies that need seed capital to mature companies looking for ways to cut costs, Broome County should be proactive in supporting and retaining local businesses and facilitating their growth. Equally important is recognizing the dynamics of business life cycles and the need to maintain a diverse portfolio of companies at various life stages.

Cost of Doing Business: Being aware that the cost of doing business in New York State and/or Broome County is a significant barrier for certain types of companies and looking for innovative ways to address or mitigate some of these costs. For example, although real estate in the County is relatively affordable, unusually high electric rates can be an issue for companies that are high energy users. If electricity cost reductions are not available



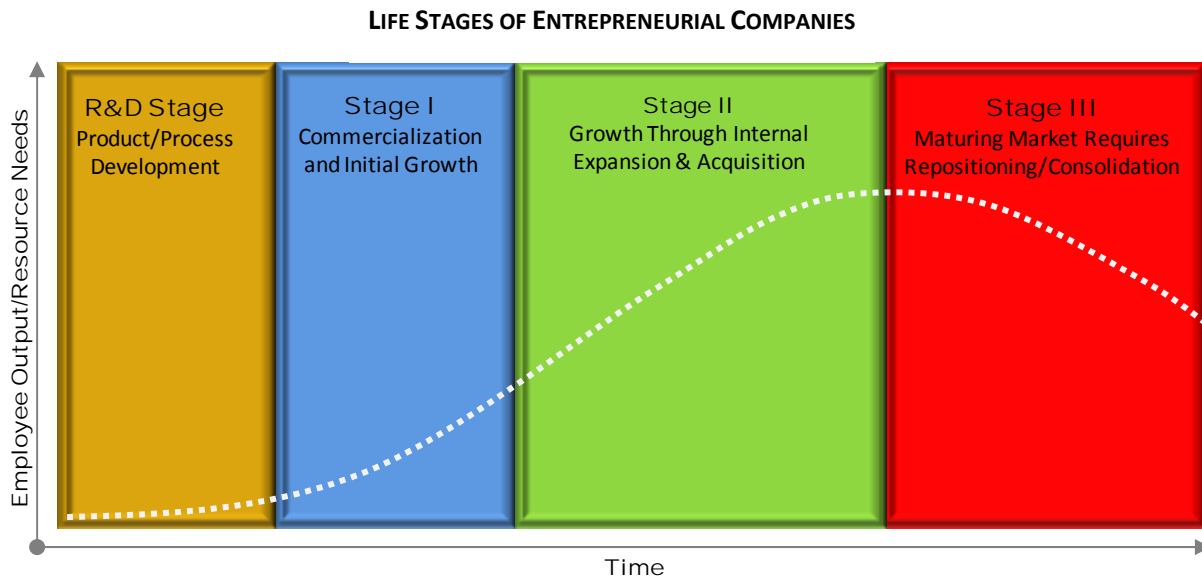
through NYSEG, the County can direct companies to the Huron Campus (which purchases power "off the grid") or let them know about state incentive programs for help companies increase their energy efficiency.

Aligning Residents With Job/Business Opportunities: Beginning with local middle and high school students, mechanisms should be put into place to communicate with residents of all ages about current and future career opportunities in the Binghamton area and their requirements. In addition, efforts are needed to engage college students in community activities and internships with local employers to increase the likelihood that they will stay in the region after graduation.



Business Life Cycles

Understanding the dynamics of business life cycles provides an insight into the needs and challenges that companies face over time. Business life cycles also explain why some companies show up in the area at one point and opt to leave later, and why many companies go out of business after a time.



Assume, for example, that we are looking at a technology-based company. At the onset, the idea for a particular product is stimulated by a technological breakthrough and a small team struggles to roll out the new product and get it on the market. The product is a success and the business rapidly expands, either organically (internally) or through a merger with or acquisition by a complementary company. (If the business is acquired by a larger firm for strategic reasons, local business leaders lose control over certain decisions and the business may be relocated.)

The company continues to invest in R&D to enhance the product and sustain its competitiveness. After a time, the product matures due to competition or is overshadowed by a newer technology; at this point, the company may scramble to cut costs to stay in business.

The table below provides an overview of the initial R&D stage and each of the subsequent life cycle stages that a technology-based company typically goes through; note the change in activities and resources at each stage. The key question from an economic development perspective is how well Broome County, or any other community, can support a business at each stage in its growth.



Factors Related to Each Life Stage of a Company				
	R&D	Stage I	Stage II	Stage III
Key Activities	<ul style="list-style-type: none"> Develop a cutting-edge idea / technology Refine process techniques 	<ul style="list-style-type: none"> Secure patents and licensing Clear government approvals Build initial market awareness and demand, distribution channels, and supply/sales contracts 	<ul style="list-style-type: none"> Keep pace with market expansion Leverage technology to enhance productivity and improve product performance to sustain competitiveness Build strong brand image and customer loyalty 	<ul style="list-style-type: none"> Gain market share Consolidate operations Look for low cost production locations Maximize productivity Reinvent new products or stay in harvest mode
Capital Needs	Grants, seed capital, angel capital	Loans and venture capital	Loans and other sources to fuel expansions without losing control	Loans to restructure operation (mostly internal financing)
Employment	0 to a few employees	1-9 employees	10-99 employees	100+
Labor/Talent Needs	Technical/creative talent	Multi-task talent	Quantity and quality of labor available in strategic locations with market access	Low cost and productive
Real Estate Needs	Lab, office and pilot space within an R&D environment	Low cost product development, office and production space	Keep pace with business growth and need for strategic market access	Low cost
Leadership Style/Skills	Creative, innovative, perseverant, high-skilled	Flexible, high-energy, multi-skilled and multi-tasking	Transition to a span of control style with dispersed responsibilities	Optimization of shrinking operations

Developing a more entrepreneurial culture that encourages innovation and promotes business creation requires a collective, sustained effort and includes:

- An environment that teaches critical thinking and supports taking reasonable risks. This starts in K-12 schools and transcends the entire community.
- Meeting places where entrepreneurs can go to share their ideas, projects and businesses on a daily basis. People talk about forward-thinking new ideas and business dynamics. There is a sense of intensity that goes beyond holding a job or running a “mom and pop” establishment.
- The celebration of new ideas through business plan competitions and shark tanks. Financial rewards are offered to develop plans into reality and get the business started.



- Ready access to mentors and low cost space and services to facilitate businesses moving forward.
- Business teams working together in a cross-functional manner to help multiple companies concurrently. This tends to occur once entrepreneurial activities have reached a tipping point.
- Awareness of the importance of entrepreneurs to the local economy by community leaders, economic development officials, and the public.
- Ongoing media coverage of entrepreneurial activity locally and regionally.
- A willingness to support promising business endeavors and make sure their success happens locally.



Recommendations: Business Attraction, Retention and Expansion

Some of the most critical functions of economic development include supporting the retention and expansion of existing businesses while providing support in the startup of new local businesses and engaging in the attraction of additional businesses to the area. The following recommendations are provided to facilitate these efforts.

1. Develop a business retention program to identify and address the needs of existing businesses in Broome County.

Business retention and expansion is one of the most important elements of a local economic development effort. To paraphrase an old adage, it is far easier (and less expensive) to retain an existing employer than to attract a new one. Existing businesses already have a stake in the community; it is in the County's best interest to retain them and help them succeed.

Currently, Broome County does not have a formal business retention program that regularly interfaces with employers. Actions needed to establish this program include:

- Developing and maintaining a database of Broome County employers with 10 or more employees, identified by industry. Because their needs are often overlooked, be sure to include small- to mid-sized and emerging businesses as well as major employers.
- Engaging in ongoing communications with employers, not only to inform them about potential resources to support their growth but also to learn about their specific needs. This can be accomplished through an electronic newsletter, posting information on a web site, regular face-to-face meetings with selected employers, roundtable discussions, and an annual web-based survey.
- Establishing a proactive team that can develop resources to support business growth and address issues. The team would be comprised of individuals from both the public and private sectors, including local and state economic development officials, workforce development staff, commercial brokers, bankers, representatives of funding agencies, and others.
- Establishing and strengthening relationships with senior officials of companies that are not headquartered in Broome County.

It has been mentioned that the existing revolving loan funds administered by the Broome County IDA are underutilized. The question is why: Are these programs being sufficiently marketed to local businesses? Is there some way to make them more appealing? Or are the revolving loan funds inadequate or inaccessible in some way (e.g., because of job creation requirements, or the significant collateral needed)? Economic development officials need to be regularly communicating with businesses in the area to find out about their specific needs and determine whether other programs or services are warranted.



Broome County Comprehensive Plan

Building our Future

2. Publicize economic development activities on a regular basis.

Internal communications are critical to a successful economic development effort. Until 2010, a quarterly Greater Binghamton Economic Development newsletter was produced and distributed by Broome County. The newsletter highlighted area economic development activities, including start-up and expansion projects, grants awarded, and program outcomes, and celebrated the success of local industries and employers.

This internal marketing effort should be revived to raise awareness of economic development in the County and combat the negativity of local media. The newsletter could be distributed directly to businesses and investors via e-mail and posted on the County website for the benefit of the general public.

3. Support the start-up of entrepreneurial businesses in Broome County.

Many of the great business success stories in the region began as small local start-ups such as Endicott-Johnson, IBM, and Link Simulation. The importance of supporting business start-ups is critical, but it should also be noted that start-ups can be divided into strategic categories that require different support approaches. For example:



Type of Business	Method of Support
Consumer services: e.g., restaurants, retail, personal services	Typically, the business entrepreneur is directed to take a class in starting a business at the community college, develop a business plan, and work with a local bank to obtain an SBA-backed loan.
Business services for local and regional clients: e.g., legal, accounting, technical services	Made aware of available office space and offered networking opportunities through the chamber of commerce and other local/regional organizations.
Manufacturing and service businesses that bring cash flow into the community	<p>A business incubator (like the one being established in downtown Binghamton) is typically the vehicle to support these businesses, offering the following services and amenities:</p> <ul style="list-style-type: none"> Access to low-cost space that meets the functional needs of each business (office, lab, production, warehousing, etc.) and provides office services, accounting and legal support, marketing and IT support, and most importantly, access to grants, loans and investors. Access to business mentors and other similar/small business peers.

The availability of support services is critical for entrepreneurial businesses. These companies should also be made aware of local/regional financial resources to avoid the prospect of outside investors taking them out of the region. It is also important to ensure that emerging businesses have the resources (e.g., labor, real estate, financing) they need to expand locally. The business retention program recommended above (under #1) can be used to facilitate these efforts. Regular outreach to start-up businesses can also help to identify gaps in services and find out what additional forms of support might be needed.



Resources currently available in Broome County to support entrepreneurship include the Entrepreneurial Assistance Program (EAP) offered at Broome Community College, the Small Business Development Center at Binghamton University, and Greater Binghamton SCORE. In addition, the Town of Union Local Development Corporation offers loans to encourage research and development in emerging fields and/or improve upon existing technologies. The Southern Tier High Technology Incubator planned for downtown Binghamton is expected to have a tremendous impact on the development of high-technology businesses, capitalizing on university-based research in the region.

Other initiatives that should be considered to support the start-up of entrepreneur businesses in Broome County include financing to support the growth of companies that “graduate” from the High Technology Incubator, and the development of a student-run investment fund offering seed capital or early stage financing for start-up companies. A number of college-based investment funds have been established to support high-potential start-ups.² Though not limited to companies within the university community, Cornell University’s BR Venture Fund invests up to \$250,000 in high growth companies in a variety of industries. A similar initiative could be developed on a smaller scale at BU or BCC.

A potential resource for Binghamton University is the National Collegiate Inventors and Innovators Alliance (NCIIA). Based in Massachusetts, the NCIIA supports “technology innovation and entrepreneurship in higher education to create experiential learning opportunities for students and successful, socially beneficial innovations and businesses.”³ Its membership is drawn from nearly 2,000 colleges and universities around the U.S. The organization offers training programs for educators and funding for courses and programs in invention, innovation and technology entrepreneurship, as well as financing, training, coaching, and investment for collegiate entrepreneurs. Syracuse University and SUNY Cortland are both members of the NCIIA.

Two events have been used to draw attention to entrepreneurial activity in Broome County. In Binghamton, an annual Business Plan Competition co-sponsored by the Binghamton Local Development Corporation (BLDC) and Broome Community College offers resources and support to aspiring business owners to start or grow their business in the City. This year’s winner received a \$5,000 cash grant from the BLDC, a \$5,000 advertising package from the *Press & Sun-Bulletin*, a one-year membership in the Greater Binghamton Chamber of Commerce, and a professional consultation in website design and Internet marketing consultation from RS WebWorks. Binghamton is also one of approximately 200 cities around the globe that has hosted a Startup Weekend, a weekend-long event during which people get together to pitch their ideas, form teams, and start companies. The event culminates with presentations to local entrepreneurial leaders and opportunities to receive feedback.⁴



² See “Students Fund Students: A Look at Campus-Based Investment Funds,” *Entrepreneur*, July 9, 2013. Accessed at <http://www.entrepreneur.com/article/227136>.

³ Website: <http://nciia.org>

⁴ More information on the Startup Weekend concept can be found at <http://startupweekend.org>.



As a long-term objective, Broome County may want to consider organizing a comprehensive, integrated network comprised of service providers, colleges and universities, business incubators, and other organizations that provide entrepreneurial support. The purpose of such a network would be to develop a seamless network of support that could be easily accessed, in person or online, by prospective and existing entrepreneurs. An entrepreneurship network could also be used to identify unmet needs, initiate joint projects, and develop a stronger culture of entrepreneurship in Broome County and the Southern Tier.

4. Develop a business attraction program to bring outside companies into Broome County.

One of the biggest challenges for economic development organizations is to reach out to companies looking to locate/expand their operations and attract them to their community. Although opportunities for business attraction were more limited during the recent recession, there has been an increase in activity based on the following examples:

- Food processing companies have been targeting New York State to establish operations related to the production of yogurt and other milk derivatives, craft beers, ethnic specialties (e.g., kosher, Hispanic), and other food and beverage items.
- There has been substantial activity just over the border in Pennsylvania in support of the growth of shale hydrofracking operations.
- Businesses are beginning to pull some of their production activity back to North America from China due to escalating labor and shipping costs, patent infringements, and other issues.
- Distribution operations continue to seek options for serving the northeastern U.S., given the limited land available for large box facilities and high costs in some locations.

Although Broome County has made and continues to make great strides in R&D and educational resources, it has a relatively low level of national awareness and attention among site selectors and business leaders. In addition, being in New York State – with its high taxes and high rates of unionization (although the unions are comprised mainly of public sector and utility employees) – results in a negative reputation that needs to be overcome. To address these issues, the County and the Southern Tier region should engage in marketing activities that promote their strong attributes in order to get on the “radar” of the national business community. Recommended actions include:

- Issuing an attractive quarterly e-newsletter that highlights positive economic development-related activities and successes in the region (e.g., R&D at Binghamton University, available resources at the Huron Campus, education programs, etc.).
- Inviting site selectors and major commercial brokerage firms to the Southern Tier via a paid familiarization (“fam”) trip, combining visits to companies, research facilities, and available real estate combined with some type of cultural or recreational activity.



- Engaging site selectors to speak at regional economic development meetings and show them what is going on in the Southern Tier.
- Leverage industry influence points (such as technical consultants, business consultants, site selectors, and commercial real estate brokers) to gain access to companies within a given industry.
- Developing a Marketing Profile on the area's resources and posting it on County and regional websites. Contents should include the most recent demographic data, a list of major employers by industry and level of employment, workforce statistics, education and training resources, maps, samples of available real estate, available incentives, quality of life information, etc.

5. Establish a single economic development website for the Binghamton area.

The Binghamton area needs one web-based point of interaction where prospective companies, site selectors, and other users can access the information they need in an expeditious manner. A single, comprehensive website that is regularly maintained and updated is preferred over multiple websites that each provide some information.

Today, simply *having* a web presence is not enough – the website must be filled with useful content.



Binghamton Economic Development

Google Search

I'm Feeling Lucky

Currently, a search on the term “Binghamton Economic Development” leads users to multiple economic development websites for Binghamton and Broome County. Local entries include the following:

Site	Point of Contact	Comments
www.gobroomecounty.com/econdev (Broome County Economic Development Group)	Commissioner of Planning and Economic Development	<ul style="list-style-type: none"> ▪ Links to other local economic development sites and County GIS portal ▪ Community Profile from 2009 (quality of information will be suspect) ▪ Economic Development Newsletter from 2010 ▪ No other information provided
www.greaterbinghamton.com (Greater Binghamton Coalition)	Commissioner of Planning and Economic Development	<ul style="list-style-type: none"> ▪ Outdated; most content from 2008 and before ▪ Economic Development Newsletter from 2011 ▪ No information on incentives
www.bcida.com (Broome County Industrial Development Agency)	Executive Director / Staff	<ul style="list-style-type: none"> ▪ Active News section ▪ No property listings; links to Fast Facility search tool ▪ Some outdated content



Site	Point of Contact	Comments
www.binghamton-ny.gov/departments/economic-development/economic-development (Binghamton Office of Economic Development)	Director of Economic Development / Staff	<ul style="list-style-type: none"> Relatively up-to-date content on demographics, the regional economy, major employers Information on city incentives, with links to county and institutional websites No property listings
www.regionalcouncils.ny.gov/content/southern-tier {Southern Tier Regional Economic Development Council}	N/A	N/A

Other economic development websites are maintained by the Town of Union, Binghamton University's Office of Entrepreneurship and Innovation Partnerships, the Greater Binghamton Chamber of Commerce, and other agencies and organizations. However, these sites did not appear within the top 20 results of the Google search.

Components of the website should include:

- Listings of available (significant) sites and buildings, with property data that is easy to access *and* download/save⁵:
 - Location (address and map) and contact information
 - Past uses of the site/building, if applicable
 - Size, dimensions (ceiling height/column widths), type and age of buildings
 - Size, zoning, contiguous land uses, and level of readiness of sites
 - Access to GIS mapping software and parcel records from Broome County's GIS portal at www.bcgis.com
- A current Marketing Profile (see previous recommendation).
- An overview of business resources and incentives, as well as workforce development programs.
- Quarterly e-newsletters referenced in #2 and #4 above and relevant news items.
- Links to other sources of information.
- Point(s) of contact for additional information (name, telephone number, e-mail address).

Periodically reviewing and updating the content of the website is imperative. Users are more likely to visit a website that is updated frequently. There are no hard and fast rules, but information on news and events which is more time-sensitive should be updated once or twice a month. Listings of sites and buildings should be reviewed monthly, or more often if commercial and industrial real estate activity picks up. Other site content, such as demographic and economic data, probably does not need to be updated more than once a year, but should be reviewed on a regular basis.

⁵ An excellent tool for finding available properties is North Carolina's Access NC, an economic development intelligence system that helps users search site details, map out locations, and view business and demographic data. See www.thrivenc.com/accessnc/search.



Broome County Comprehensive Plan

Building our Future

Social media can be used to support both internal and external marketing, drive traffic to the website, and sustain relationships with employers, site selectors, educators, entrepreneurs, and other stakeholders. LinkedIn, Twitter and Facebook have been used effectively by economic development organizations, in part because they are widely used and open to diverse audiences. There may be value in other tools such as YouTube for presentations and online property tours. However, social media is often most effective as a follow-up to face-to-face meetings, fam trips, speaking engagements, or other activities. A Facebook page should not be used as a substitute for a content-rich and updated website.

A Few “Best-In-Class” Websites

Focus Central Pennsylvania

www.focuscenpa.org

Indy Partnership

www.indypartnership.com

City of Dayton Office of Economic Development

www.daytonohiobusiness.com



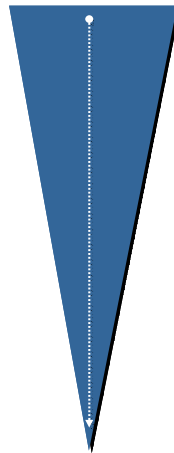
Typical Site Selection Process

Although the process may vary, the graphics on this page show how site selection consultants and companies typically select a business location. Phase 1 is the *feasibility phase*, in which the company defines its needs and, based on a hypothetical location, determines the cost advantages or challenges and the overall risks related to a location decision. Phase 2 is the *location selection phase*. First, the company and/or its consultant identifies and screens potential locations based on a set of predefined selection criteria.

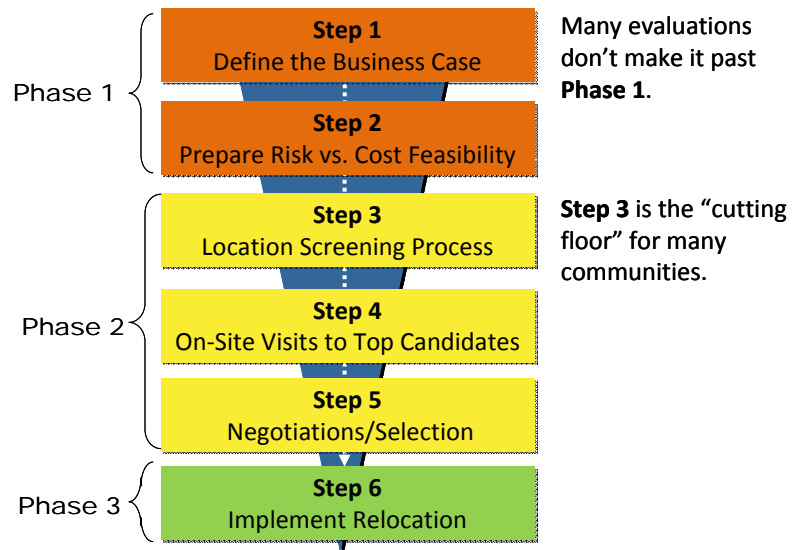
The location screening process (Step 3) is shown in more detail in the chart below. Some locations are screened out; others are identified as top candidates and in-person visits are made.

The site selection process has several implications for communities:

- Decisions are made without any direct input from or interaction with community representatives, based on the content of the community's website. *This information must be easily accessible and up-to-date.* If a user cannot find the information needed after a few short minutes on a website, he or she will move on to the next candidate location.



Typical Site Selection Process



Details on Step 3: Location Screening

Client Discussion: Define Key Selection Criteria

- Right to Work State (for manufacturing)
- Operating costs (taxes, real estate, labor, energy, etc.)
- Geographic positioning to optimize logistics
- Industry presence (for specific skills and support services)
- Transportation access (rail-bulk/container, air, interstate and water port)
- Demographics (population size by age group, education, etc.)
- Other resources available (land/buildings, high utility capacity, training resources, etc.)

Screen Locations and Profile Top Candidates

Engage in location screening based on criteria identified above.

Review web sites for information.

Profile top locations that pass the screen.

Present Results to Executive Team

- Having a *single* web site with all of the information required is critical to marketing a community.
- If a community gets a phone call, it is likely that the site selector or company has already done some analysis, and the community could be a serious contender. A point of contact should be featured on the website.



Recommendations: Real Estate

Recommendations related to real estate focus on having the right types of sites and buildings available in optimum locations, served by the appropriate utilities and at a high level of readiness to support the attraction and expansion of specific industries and life stages of companies. The real estate is viewed from two perspectives: (1) *What do companies representing specific industries and life stages look for?* and (2) *What are the highest/best uses of the available sites?*

Many companies seeking manufacturing, distribution and office space will seek existing buildings to lease as a first priority. Others will opt to buy or build a building as part of their business strategy. For Broome County to remain competitive, it needs to maintain a portfolio of sites and buildings that match market demand, as described in the sections below.

Manufacturing and Warehouse Space	
General Needs	Industrial and manufacturing companies are attracted to “flex space” because it can be adapted and divided for multiple purposes: small office, manufacturing and warehouse/distribution. This type of space has a wide application of uses for both emerging and mature businesses.
Details	Typical space requirements include ceilings >25’ and column widths >40’; the building is clean and meets all building codes (this is interpreted as buildings that are <20 years old or have been upgraded); and the size of the building is at least 50,000 SF and can be easily expanded. Buildings also need to have reasonable and safe access to an interstate highway or other limited access highway. Having the building available for lease at competitive market rates will eliminate the issue of high property taxes because they will be wrapped up in the lease rate.
Currently Available	Most of the available industrial/warehouse buildings in the area are much older than 20 years. Some are in an acceptable condition and have ceiling heights and column spacing that would be attractive to prospective businesses, including space available at the Huron Campus, at the airport and at Glendale Technology Park.
Recommendations Going Forward	Working with the Broome County IDA and the commercial real estate community, maintain an accurate inventory of properties that meet the basic criteria for flex space and develop a contingency plan to maintain an inventory of at least 200,000 total square feet for buildings at least 25,000 SF in size.



Office Space	
General Needs	Office space serves a number of target industry sectors ranging from engineering and architecture to information technology and multiple business services. Some firms will opt for a downtown environment, while others prefer the suburbs. The focus of this recommendation is on the midsize/larger needs of office users based on space requirements of 230 to 300 SF per person and contiguous space of 10,000 SF (30 to 40 employees) to 75,000 SF (250 to 300 employees).
Details	Class A/B office space with 10,000 to 75,000 SF contiguous layouts (on one or more floors) and adequate parking; located in downtown and suburban areas; served by local amenities (e.g., restaurants, shopping, lodging, etc.) and access to transportation (may include public transportation, interstate/feeder highway access, etc.).
Currently Available	There is currently a modest inventory of office space in the 10,000 to 75,000 SF contiguous space range located throughout the area (see Table 4 in the Real Estate Assessment). It is older space, some of which has undergone rehabilitation or been well-maintained.
Recommendations Going Forward	For the existing demand, the current space seems to be adequate. Going forward, it is important to work closely with the commercial real estate community to monitor the quantity, condition, location and amenities related to office space in the County.

Sites for New Construction of Manufacturing, Distribution and Office Space	
General Needs	Prospective companies will vary in their need for size, location (access to labor/transportation), and utility requirements based on type of operation, type of industry and life stage of company. Companies requiring unique facilities or unable to find an available building that meets their specifications will typically acquire a site and construct a building.
Details	Sites may range from 5 to 50 acres in size; not located in a flood plain or have rock outcrops or steep slopes; and are at a high level of readiness (or shovel ready status) based on the following: <ul style="list-style-type: none"> ▪ Ownership of the site is officially documented and in the hands of a third party ready to sell. ▪ Basic tests have been completed on the site, such as: <ul style="list-style-type: none"> ▪ Soils analysis for structural integrity based on core samples that provide evidence of the types and depths of soil deposits, depth to groundwater, depth to bedrock, etc. ▪ Environmental Site Assessment - Phase I (ASTM E1527-05 Standard Practice for Environmental Site Assessments) ▪ If it is a brownfield site, contamination issues have been addressed to state/federal standards and the range of uses has been defined ▪ Assessment of site's historical significance (buildings, archaeological sites, graveyards, etc.) ▪ Wetlands analysis and mitigation plan, 100-year flood plain presence, etc. ▪ Stormwater management plan ▪ Protected and rare species evaluation ▪ Traffic impact study as required ▪ A general site plan has been developed to define net usable land, water retention areas, and access roads.



Sites for New Construction of Manufacturing, Distribution and Office Space	
	<ul style="list-style-type: none"> Utilities, road, and rail access have been identified and the cost/timing of any required installation is reasonable. <p>Access to an interstate is typically within a few miles; smaller firms or those with limited truck traffic can be located further from an interchange.</p>
Currently Available	<p>A list of available sites and discussion on best use is presented below. The sites vary in size, access to an interstate, utility services, condition (from brownfield to undeveloped forested areas) and readiness (time required to commence construction).</p>
Recommendations Going Forward	<p>Broome County and its development partners from the private sector should maintain a portfolio of sites that meet the needs of target industry companies in order to stimulate additional economic growth. A critical challenge within the County is identifying shovel-ready sites that have reasonable interstate and full utility access but are not in a flood plain or have steep slopes. Future growth will depend, in some part, on the redevelopment of existing sites (clean up brownfields, acquire and raze structures on land zoned industrial or commercial, etc.). To meet this need, the County should:</p> <ul style="list-style-type: none"> Work with municipal officials to identify a master list of sites in the urban core, in surrounding towns, and near the interstates that have the best potential attributes as described above (e.g., full utilities, out of flood plain, reasonably flat without rock outcrops). Maximize the use of Broome Corporate Park by acquiring and aggregating properties contiguous to the park for future expansions. Initiate the NYS Shovel Ready Certification process for 1 or 2 sites. Continue to work with the state, municipalities, and private developers – and through the recently-approved Broome County Land Bank – to prepare brownfield sites zoned industrial or commercial for redevelopment through remediation, acquisition and demolition, and related activities. Work with Binghamton University and Broome Community College in identifying building space within a mile of each campus for designation as tax-free locations under the new START-UP NY program.



Available Industrial/Commercial Sites in Broome County with Potential Uses and Recommended Actions

	Description	Acres	Attributes of Site(s)	Potential Uses/Recommended Actions
1	Binghamton Airport, Town of Maine Site 1A Site 1B Site 2 Site 3 Site 4 Site 5	28 74 87 13 42 42	<ul style="list-style-type: none"> Majority of land is forested/undeveloped. Located 5+ miles from the interstate via a two-lane highway through residential areas. Utilities: power and water (nearby), sewer being installed in 2014; several of the sites have telecom/Internet Relatively long distance to concentrations of labor in Binghamton. Without public transit. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> expanded aviation services, assembly operation needing to be near airport, parts or components manufacturing, small distribution (<50,000 SF) due to distance to interstate on two-lane highway through residential area. Need to complete utility installation (sewer) before sites are viable unless it is a “dry” or low sewer use operation that can utilize a septic tank/drain field or other stand-alone system. There should be at least one site with ~5 acres cleared and brought to a high level of readiness. Offer both the existing available space at the airport along with the sites to maximize the options for prospective companies.
2	Off 12A near I-88 Chenango Bridge	13.3	<ul style="list-style-type: none"> Adjacent to Chenango River (majority of the site is within the floodplain) Zoned commercial Utilities: Power, water, telecom 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Small distribution/warehousing as well as other commercial uses. Need to complete sewer access to increase utilization.
3A	100 LaTourette La. Binghamton	5.5	<ul style="list-style-type: none"> Near Glendale Tech Park and sports park Long/narrow site. Full utilities 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Small manufacturing or office building (long/narrow site will be a challenge).
3B	1355 Campville Road, Union	18.5	<ul style="list-style-type: none"> Near Glendale Tech Park and sports park ~10 usable acres Power, telecom/cable (no public water or sewer) 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Need to complete water/sewer connection to be a viable site.
4	Charles Street Business Park, Binghamton	25+	<ul style="list-style-type: none"> Clean former GAF film site. Adjacent to residential area. Full utilities. Lots being divided into smaller sizes. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Manufacturing of parts/components in buildings up to 100,000 SF (assuming lot sizes of 5 acres). Operations need to be compatible with adjacent residential communities.
5	Broad Avenue RR Property, Binghamton	12.5	<ul style="list-style-type: none"> Owned by CP Railroad, want rail user. Only site with rail access. Full utilities in vicinity of site. Close proximity to interstate 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Fabrication or plastics molding operations with a need for rail access.



Available Industrial/Commercial Sites in Broome County with Potential Uses and Recommended Actions

	Description	Acres	Attributes of Site(s)	Potential Uses/Recommended Actions
6	67, 71 Frederick Street, Binghamton	11.2	<ul style="list-style-type: none"> Older existing buildings on the site. Full utilities. Close proximity to interstate. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Early stage manufacturing firm seeking low cost facility with opportunity to expand.
7	399 Broome Corporate Pkwy, Conklin	26.2	<ul style="list-style-type: none"> Within Broome Corporate Park, interstate access. Full utilities. Direct access to interstate. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Manufacturing (electronics, parts, components, assembly) as well as distribution. Site is well positioned for interstate access.
8	379 Broome Corporate Pkwy, Conklin	21.5	<ul style="list-style-type: none"> Within Broome Corporate Park with interstate access. Full utilities. Direct access to interstate. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Manufacturing (electronics, parts, components, assembly) as well as distribution. Site is well positioned for interstate access.
9	Off Exit 77, Windsor	80	<ul style="list-style-type: none"> Immediate labor force is very limited. Zoned commercial. Utilities: power, water, sewer. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Storage/distribution and other commercial applications. Immediate labor force is limited. Site has steep slopes and would need to be terraced. If the back portion of the property is zoned industrial, the site could accommodate manufacturing, warehousing, or broader applications.
10	Borden Street, Deposit	7.46	<ul style="list-style-type: none"> Adjacent to residential properties and river. Immediate labor force is very limited. Utilities: power, water, sewer. 	<ul style="list-style-type: none"> <u>Potential Uses:</u> Small manufacturing firm seeking a more remote location. Immediate labor force is limited.

Other Recommendations

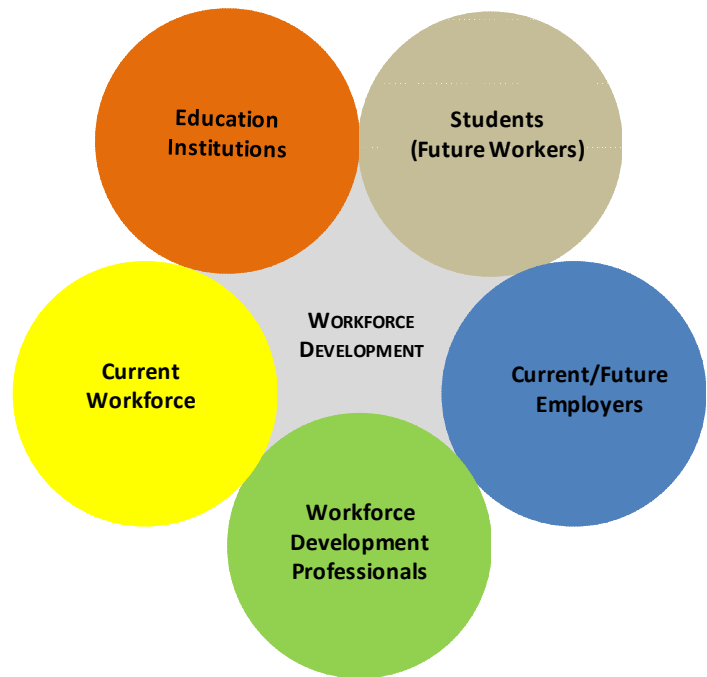
1. Provide a focused promotion on the existing real estate assets that are at a reasonably high level of readiness: e.g., the Broome Corporate Park, the Huron Campus, Glendale Technology Park, and other properties.
2. Develop a strategy that defines properties available to companies that “graduate” from the High-Technology Incubator, aligning needs by size and type of space offered at affordable rates (possibly with graduated leases based on business revenue growth).



Recommendations: Workforce, Education and Training

The cost, quality, and availability of skilled labor are among Broome County's most important assets for economic development. However, the workforce is aging; in some industries, upwards of one-quarter of the labor force is age 55 and over. This is a particularly critical issue for the County's manufacturing sector, and to a lesser extent, for transportation and warehousing.

It is important to maintain a responsive, highly qualified workforce that meets the evolving needs of local employers. This requires the involvement of economic development officials, workforce development professionals, and educators in understanding and responding to the needs of specific companies and industries. It also requires building an awareness of current and future career opportunities among students as well as existing workers. The following recommendations are provided to facilitate workforce development and preparation in Broome County.



1. Develop career pathways and related initiatives in local school districts to better prepare high school students for college and careers.

Around the U.S., many school districts are adopting new educational approaches that incorporate project-based learning and “real-world” internship experiences, enhancing the pathways from high school to college and a career while making education more relevant for students. The approaches vary:

- Some districts have established *career academies*, small learning communities within larger high schools focused on specific, high-growth industry sectors such as advanced manufacturing, health care, or engineering. Typical components include a rigorous college-preparatory curriculum that uses project-based learning to give lessons real-world context and relevance; a career technical curriculum that is infused into (rather than separate from) the core academics; opportunities for job shadowing, internships, or mentorships; and a strong network of support services to help students master the academic and career content.
- Other districts have developed *career pathways* based on existing vocational programs. As with career academies, career pathways programs involve both industry leaders and teachers in developing the curriculum and defining the skills that students should have for success in a chosen field. Students also have opportunities for hands-on experience through project-based learning, internships, and job shadowing. However, career and technical programs are not integrated into the academic curriculum as



they are in career academies. Nevertheless, unlike the old “vocational” approach – in which students were tracked to either enter a trade or go to college upon graduation – career pathways are meant to lead to an industry-recognized credential or certificate at the post-secondary level or to an associate’s or bachelor’s degree. Programs often have dual enrollment and/or articulation agreements that allow participating high school students to earn college credit.

Earlier this year, Governor Andrew Cuomo announced plans to designate 10 more schools to follow the example of the Pathways in Technology Early College High School, known as P-TECH, in Brooklyn.⁶ Formed through a partnership between public education and IBM, P-TECH is a unique institution that “connects high school, college, and the world of work through meaningful [public-private] partnerships.” The school was established, in part, out of a desire by educational leaders to seek new approaches to career and technical education. “The so-called ‘next generation of CTE’ consists of an emphasis on both college and career readiness skills and competencies through closer alignment with industry and higher education as well as focused pathways that bring students through postsecondary education to a solid career.”⁷

P-TECH is just one example of a high school that is transforming the way that students learn and preparing them for future success. Local school districts in Broome County should consider these and other effective strategies to engage high school students and better prepare them for college and employment, especially in industries and occupations that are in demand in the region.

2. Increase awareness of career opportunities in advanced manufacturing and other local industry sectors among high school students and unemployed youth.

In spite of the long-term decline in the number of manufacturing jobs in the Binghamton area, the demographic profile of manufacturing in Broome County – and in many areas of upstate New York – is disproportionately comprised of older workers, i.e., age 55 and over. This could become a serious problem as these workers begin to retire; manufacturers will have difficulty finding qualified replacement workers.

Broome Tioga BOCES has a welding program, but other manufacturing-related courses are being phased out due to a lack of interest. Many young people have inaccurate and outdated ideas about manufacturing. There is a need to introduce high school students and unemployed youth to advanced manufacturing and the high-paying career opportunities it offers.

In western New York, a program called *Dream It, Do It* WNY has been established to educate high school juniors and seniors about high-tech manufacturing careers. Dream It, Do It is a combined effort between the National Association of Manufacturers, the Buffalo Niagara Manufacturing Alliance, and the Buffalo Niagara Partnership. It provides an opportunity for students to learn about the products manufactured in their counties, the different types of careers available in manufacturing, and the education and skill levels required for these positions.

⁶ WAMC, “NYS and IBM Want to Prep Students for High-Skills Jobs,” March 4, 2013, accessed at www.wamc.org/post/nys-and-ibm-want-prep-students-high-skills-jobs.

⁷ For more information on P-TECH, see <http://www.ptechnyc.org/ptech>. For discussion of what various states are doing to build career pathways, see “New High School Pathways Emerging,” *Education Week*, April 23, 2013.



Since the program was first launched in 2009, Dream It, Do It WNY has had more than 7,000 students participate in career fairs, school presentations, technology tours, lean manufacturing training, and other activities. With funding assistance from the Western New York Regional Economic Development Council, the program has expanded throughout Chautauqua, Erie, Niagara, Cattaraugus, and Alleghany Counties, and several other counties in the Corning and New York City areas are interested in getting involved. A similar Dream It, Do It initiative in Broome County would be very beneficial.

3. Make a concerted effort to recruit unemployed workers, women, minorities, refugees, and recent immigrants to industries such as manufacturing, construction, and transportation and warehousing which have high proportions of older workers.

Another way to address the high proportion of workers approaching retirement age is to step up efforts to recruit individuals from groups that historically have been underrepresented in certain industries. For example, men comprise 70% or more of the local workforce in construction, transportation and warehousing, wholesale trade, and manufacturing. Educators, businesses, and workforce development professionals all have a role to play in mentoring and facilitating the entry of these groups into the labor force. Binghamton is used as a refugee resettlement area. There are also many international students at Binghamton University.

4. Improve the retention of college graduates in Broome County and the Southern Tier region.

Numerous stakeholders have commented on the need to retain college graduates and integrate them into the community. This is a common lament in communities across the country, even in large cities like Boston and Philadelphia where hundreds of thousands of students attend college every year. It is a particular salient issue for upstate New York because of the large proportions of residents age 55 and older.

“Engaging students and young professionals” is one of the vision items cited in the Action Plan of the Broome County Comprehensive Plan. The Action Plan calls for “provid[ing] the amenities and housing opportunities that appeal to students and recent graduates... more places to gather, socialize, and network which are not related to the bar scene.”

Increasing the retention of recent graduates could be achieved, in part, by engaging students in activities that integrate them into the broader community while they are still in school. This includes getting students involved in volunteer opportunities, inviting them to sit on the boards of local organizations, and facilitating paid or unpaid internships with local businesses.⁸ Encouraging entrepreneurship among BU and BCC students (see Business Attraction, Retention and Expansion recommendations) is another way to foster a sense of investment in the community.

5. Develop additional resources to educate and train Broome County residents for jobs in warehousing and distribution.

⁸ There was a student-led initiative established at Binghamton University, known as Catalysts for Intellectual Capital 2020, whose efforts focused on increasing the retention rate of BU graduates by enhancing connections between the university and the local community. Unfortunately, the initiative appears to have gone dormant.



Despite the significant presence and potential growth of warehouse operations in Broome County, there are no distribution and logistics-related training programs offered at local colleges and universities. In fact, only five post-secondary educational institutions in upstate New York have degree programs in logistics and supply chain management: Syracuse University, Clarkson University, Rochester Institute of Technology, SUNY College at Plattsburgh, and Rensselaer Polytechnic Institute (RPI).⁹ Graduates of these programs typically go on to management and supervisory positions in the industry.

To meet the needs of companies in the Capital Region, Schenectady County Community College (SCCC) is currently developing a new supply chain management degree. According to a May 2013 news article: “SCCC is awaiting State Education Department approval of the two-year degree program... [The college] is looking for companies that will provide 500 hours of paid, on-the-job training for students in the program.” The program is expected to be more hands-on than theoretical. SCCC has also established two non-credit certificate programs to train technicians and materials handlers.¹⁰

It should be noted that Broome Community College has offered a five-week Association for Operations Management (APICS) Supply Chain Management course through its Continuing Education arm. The course is the first in the APICS Certification in Production and Inventory Management (CPIM) program. The course is generally attended by individuals who are already employed, but Broome Tioga Workforce New York has, in the past, paid for unemployed jobseekers to attend.



A potential model for a BOCES-level program is the Material Handling/Logistics Technology Program at the Lehigh Career and Technical Institute (LCTI) in Pennsylvania. This program actively engages students in the processes of receiving, shipping, order picking, and operation of numerous types of material handling equipment. Students learn by working in a state-of-the-art 17,000 square foot distribution center which houses today's most contemporary technology: a computer-controlled warehouse management system, computer-controlled vertical and horizontal carousels, and a computer-controlled integrated conveyor system. All supply chain processes are replicated within the facility. LCTI is considered an exemplary school by the Material Handling Institute, an industry group whose members include the Raymond Corporation in Chenango County.

The development of additional programs to educate and train residents would further support the retention, expansion, and attraction of warehousing and distribution operations in Broome County and the Southern Tier.

⁹ Syracuse University and RPI have both bachelors and masters degree programs in logistics and supply chain management.

¹⁰ Pam Allen, “SCCC reaches out to local companies to help shape new supply-chain degree,” *The Business Review*, May 10, 2013. As this section was written, the program received formal approval from the State Education Department.



6. Continue to work with Broome Community College and Binghamton University to ensure the availability of appropriate programs to support workforce development in high-demand occupations and industries.

The educational institutions in Broome County have been highly responsive to the needs of local employers. Recently, Governor Cuomo announced the award of more than \$12 million in state funding to 36 SUNY campuses to support student training in identified “high-need” occupations. Occupations are considered high need if they are projected to have a large number of total openings, a high growth rate, or a combination of both in the coming years, based on data from the NYS Department of Labor. Established to meet state demand for nurses and engineers, SUNY’s High Needs Program has expanded to include “emerging 21st century” career opportunities related to health care, biomedical/biotechnical, renewable/clean energy, agriculture/agribusiness, and information technology.¹¹

Binghamton University will receive a total of \$1,704,000 to hire new faculty and expand programming in the areas of cyber security, mechanical engineering, and nursing, including a doctorate of nursing practice program. Broome Community College will receive \$191,301 to expand its clinical laboratory technician and histological technician programs. The two BCC programs are offered to students throughout the SUNY system online via distance learning. In order to receive funds, BU and BCC had to demonstrate how their program would become self-sustaining after three years.¹²

Broome County, its workforce development partners, and employers should continue to maintain strong relationships with BCC and BU. Information gathered from local businesses on labor needs and requirements should be formally reviewed and shared with educators for potential action on a regular basis.

¹¹ Governor Andrew M. Cuomo press release, “Governor Cuomo Announces \$12 Million for 36 SUNY Campuses to Train Students in High Need Fields,” June 6, 2013. Accessed at <http://www.governor.ny.gov/print/6738>.

¹² *Press Connects*, “BU, BCC set to receive funds from High Needs,” June 6, 2013.



Recommendations: Incentives

Incentives are used both to develop resources that generally support economic development, and to attract companies and encourage private investment, often by directly reducing the cost of doing business. *Financial incentives specifically for business attraction and expansion are described in Section C.* Incentives can also help to “fill gaps” in resources to enhance a community’s overall competitiveness. Based on the Real Estate Assessment and Incentive Evaluation, the following gaps or issues need to be addressed:

- Development/redevelopment of properties to achieve contemporary real estate options
- High property taxes
- High cost of power outside the Village of Endicott and the Huron Campus

Real Estate

Broome County should continue to take advantage of existing resources available to develop and redevelop sites at a high level of readiness. Resources include Regional Infrastructure Fund for Shovel-Ready Sites and the Community Revitalization Fund offered through the Southern Tier Regional Economic Development Council, though the latter can be used only for properties in downtown locations, restricting its use to office and/or mixed use development.

The County may want to consider offering incentives for the *redevelopment* of vacant and underutilized (yet structurally sound) buildings. Many of these structures were built for single end-users and are functionally obsolete, with code violations, low ceiling heights, and potentially minor contamination. Some of these buildings could be upgraded, converted, and marketed as multi-tenant properties serving manufacturing, warehouse/distribution, R&D, and other industrial users. The incentives offered could be financial (e.g., matching funds to leverage private investment) and/or regulatory (streamlined permitting and approvals). Given the relatively low cost of real estate in Broome County, it may not otherwise be feasible for a developer to pursue.

As an example of a financial assistance program focused on redevelopment, Genesee County in western New York recently established a new \$500,000 revolving loan fund to support the redevelopment of vacant and underutilized commercial/industrial buildings in downtown Batavia and town and village centers. The loans will range from \$25,000 to \$100,000 per project, with interest rates set at 80% of prime and repayment schedules of 3 to 10 years, depending on the project. To qualify, developers will need to have at least a 30% equity stake in the project or already have a traditional bank loan in place; they will also be required to provide a business plan with their loan application. Loans will be approved and administered by the Genesee Gateway Local Development Corporation. Broome County could develop a similar program to encourage adaptive reuse.

Property Taxes

Current mechanisms to reduce property taxes on commercial and industrial real estate in Broome County include the state’s Excelsior Real Property Tax Credit (available only to firms that meet certain employment



and investment thresholds) and payment-in-lieu-of-taxes (PILOT) agreements issued by the Broome County Industrial Development Agency (BCIDA). In 2010, the BCIDA provided nearly \$7 million in total tax exemptions; these were offset by \$3.4 million in PILOTs, resulting in net tax exemptions of approximately \$3.5 million.

Although property tax abatements are a well-established tool for economic development, many questions have been raised about their effectiveness. A common criticism is that tax abatements are provided to companies indiscriminately, with little or no accountability. The job creation promised by recipients of tax abatements is not always fully realized. Another criticism is that they are easily manipulated, often used by companies to pit communities against each other. Property tax abatements are sometimes given to businesses that would have selected the same location even in the absence of an incentive. Finally, taxpayers assert that by providing property tax abatements to large corporations, the tax burden in the community is then shifted to local homeowners and small businesses.

The report *Rethinking Property Tax Incentives for Business* published by the Lincoln Institute of Land Policy recommends that local governments set high standards for the use of property tax incentives “to avoid offering incentives with costs that exceed their benefits.” Specific recommendations that would apply to Broome County include:

- Restricting incentives to projects that meet certain standards (e.g., the retention or creation of high-wage jobs) and providing higher incentives to projects hiring local residents
- Limiting incentives to businesses that export goods or services out of the region (i.e., granting property tax abatements for manufacturing facilities, but not for commercial or residential development)
- Creating a transparent, apolitical process for making decisions on whether to grant incentives.¹³

In lieu of substantial changes to real property taxation at the local and state levels, the County should be aware that leasing is one way to neutralize the issue of high property taxes. A company renting office or industrial space is unlikely to see a tax bill, as property taxes are typically included in the lease rate. Another way is to utilize the state’s new START-UP NY Program to direct eligible businesses to designated tax-free space.

Utility Costs

As noted in the Incentives Evaluation, low-cost power is available for high energy users. For companies that do not qualify for electricity cost reductions through NYSEG, a location at the Huron Campus or in the Village of Endicott may be appropriate.

Broome County should also connect businesses with programs available through the NYS Energy Research and Development Authority (NYSERDA). NYSERDA’s aim is to help New York meet its energy goals: reducing energy consumption, promoting the use of renewable energy sources, and protecting the

¹³ Daphne A. Kenyon, Adam H. Langley, and Bethany P. Paquin, *Rethinking Property Tax Incentives for Business*, Lincoln Institute of Land Policy, June 2012. Accessed at http://www.lincolnst.edu/pubs/2024_Rethinking-Property-Tax-Incentives-for-Business.



environment. The agency offers several incentive programs to help companies increase their energy efficiency and reduce utility costs:

- **The Industrial and Process Efficiency Program (IPE)** provides performance-based incentives to help companies make energy efficiency and process improvements. Incentives are based on annualized energy savings and are capped at 50% of project cost. Eligible facilities include manufacturing facilities, support operations such as warehousing and distribution sites, and data centers. Incentives are available for both existing facilities and new construction. Applications are accepted on a first-come, first-served basis.

In 2012, NYSEDA provided IPE funding to Anheuser-Busch's Baldwinsville brewery for the installation of a 24-ounce can bottling line. In June 2013, the company was honored at the Northeast Energy Efficiency Summit in Springfield, MA for its continued efforts to advance energy efficiency at the brewery, resulting in annual energy savings of 9.3 million kilowatt hours (kWh).

- **The Existing Facilities Program** offers a broad portfolio of incentives to help offset the costs of implementing energy efficiency improvements in existing commercial facilities across the state. The program has two incentive "paths" based on the scope of the project: a pre-qualified path offering up to \$60,000 for "small, simple equipment changeouts" on a dollar-per-unit, reimbursement basis; and a performance-based path with incentives ranging from \$30,000 to \$2 million for "large, custom improvements." The latter requires applicants to assess their current energy usage and submit a plan for long term energy savings expected to result from the installation of energy-saving equipment.
- **The New Construction Program** for commercial/industrial businesses provides assistance when incorporating energy-efficiency measures into the design, construction, and operation of new and substantially renovated buildings. Technical assistance is available to help evaluate energy-efficiency measures and provide guidance to the design team on incorporating new and emerging energy-efficient technologies into a building. Funding is also available to offset the additional costs associated with the purchase and installation of approved equipment.



Tools

Planners are builders. And a comprehensive plan is often seen as a ‘blueprint’ for the community. If this document is a blueprint, and we want to build toward a shared vision, we need to understand what tools we have in our toolbox. The focus of this section will be on resources that we control locally as opposed to grants that need to be sought.

Comprehensive Plans, Zoning and 239 Reviews

The most widely used tools that municipal planners rely on are the comprehensive plan and zoning regulations. These two techniques are deeply interrelated. The comprehensive plan is written first, and it establishes the vision for the community. Later a zoning ordinance is drafted to conform to the vision in the plan. The zoning ordinance can be used to restrict or encourage development to assist in implementing the comprehensive plan.

Over the past decade, Broome County Planning has worked with the towns of Lisle, Triangle, Fenton, Dickinson and Binghamton and the Village of Whitney Point to prepare their comprehensive plans. The City of Binghamton, and the Towns of Union, Chenango, Conklin and Kirkwood prepared comprehensive plans independently of the County. In reviewing these plans, several common goals emerge:

- Preserve and Maintain the Rural Character and Protect and Promote Agriculture
Fenton, Lisle, Triangle, Union, and Town of Binghamton
- Protect and Manage Natural/Environmental Resources
Fenton, Lisle, Triangle, Town of Binghamton, Union and Maine
- Improve the Appearance of the Town/Improve Code Enforcement
Fenton, Lisle, Town of Binghamton, City of Binghamton, Dickinson, and Maine
- Protect, Preserve and Enhance Local Housing Stock
Fenton, Lisle, Triangle, Union and Maine
- Guide and Manage Economic Development
Lisle, Fenton, Town of Binghamton, Union and City of Binghamton



Broome County Comprehensive Plan

Building our Future

- Provide or Encourage Senior Housing
Triangle, Town of Binghamton, and City of Binghamton
- Preserve and Enhance the Character of Neighborhoods and Village Centers
City of Binghamton, Union, Maine, Whitney Point
- Emphasize and Enhance Gateways, Corridors and Connections
City of Binghamton, Whitney Point

In New York, zoning is handled at the municipal level, so each town and village has the opportunity to have its own zoning ordinance, zoning board of appeals, and planning board. The Countywide Zoning Map in the Land Use Chapter shows the general zoning districts for towns and villages across the county. Although these ordinances are drafted, adopted, and administered at the local level County Planning can indirectly influence how these zoning ordinances are revised.

A tool related to zoning is the 'Section 239' review performed by County Planning on certain projects. Section 239 of general town law, gives counties the authority to comment on projects within 500 feet of 1) A municipal boundary; 2) An existing or proposed county or state park or recreation area; An existing or proposed county or state road; 3) Any existing or proposed stream or drainage channel; 4) Any existing or proposed county or state land, building or institution; or 5) A farm in an agricultural district. In a typical year, 200 to 300 cases come to the County for Section 239 review.

If the County Planning Department recommends denial, the zoning or planning board needs a 'super majority' vote to override. This is a majority plus one, and it can influence approvals that would be narrowly decided. Through the 239 process, County Planning also provides technical comments from a variety of agencies that help the towns and villages make a more informed zoning decision. If this countywide comprehensive plan includes recommendations, the Planning Department can cite it in future 239 review letters. This can influence how land use decisions are made for many years.

In addition to the traditional comprehensive plan and zoning tools, there are several other relevant countywide plans in place in Broome County. These include:



Broome County Comprehensive Plan

Building our Future

Agricultural Economic Development Plan

Agriculture is a significant portion of the Broome County economy, and a substantial portion of our local land use. According to the 2007 Census of Agriculture, there are 580 farms which occupy 86,613 acres in the county. The market value of all agricultural products sold by Broome County farms was nearly \$30 million and there was nearly \$160 million in market value in land and buildings on farms in the County.

Recognizing the importance of farming, the County legislature adopted an Agricultural Economic Development Plan in December 2001. This is a comprehensive document that provides an inventory of the resources, land use, development, economics, trends and markets as they relate to the county's agricultural industry. Goals, Objectives and an Action Plan were developed to address the following major initiatives:

1. Implement an Added Value Enterprise System
2. Coordinate a Direct Marketing Initiative
3. Develop an Agricultural Tourism Initiative
4. Create a Forest Management Initiative
5. Institute an Agricultural Planning Initiative
6. Encourage an Agricultural Awareness Initiative

Transportation Tomorrow: 2035

The Binghamton Metropolitan Transportation Study (BMTS) is the designated transportation planning agency for the greater Binghamton area. In 2010, it adopted *Transportation Tomorrow: 2035 - Creating a Sustainable Future* as its plan for this region. *Transportation Tomorrow: 2035* lays out the following goals:

Sustainability Goals:

- To reduce the per capita amount of carbon-based energy consumed and greenhouse gases produced by the transportation sector by 50% by 2035
- To enhance the livability of the Region with appropriate transportation investment

Accessibility Goal

- To ensure that the regional transportation system provides convenient mode-neutral access to destinations including employment, education, and services



Broome County Comprehensive Plan

Building our Future

Mobility Goal

- To create a regional transportation system that provides travel choices so personal travel and goods movement can maximize efficiency

Safety Goal

- To create a regional transportation system that provides safe and secure travel for all users and all modes

System Preservation Goal

- To maintain the regional transportation system in a state of good repair

Binghamton Metropolitan Greenway Study

Also drafted by BMTS, the Binghamton Metropolitan Greenway Study addresses trail development in the Southern Tier. The purpose of the Greenway Study is to determine the feasibility of developing a network of riverbank trails. The study, completed in 1999, identifies 13 trail master plans. These are comprised mostly of off-road trails, supplemented by on-road bikeways and sidewalk links. Connecting these disparate elements is the Binghamton Metropolitan Bicycle Route System. The following are the 13 trail master plans presented by the Greenway Study:

- Village of Owego to the Hickories Trail (4 miles +/-)
- NY Route 17/I-86 Multi-Use Trail (7 miles +/-)
- Town of Union Trails (10 miles +/-)
- Town of Vestal Trails (10 miles +/-)
- Vestal Parkway Trail (3.5 miles +/-)
- City of Binghamton Trails (3 miles +/-)
- Otsiningo Park Trail Network (3 miles +/-)
- Chenango Bridge Trail (2 miles +/-)
- Port Dickinson Park Trail Network (10 miles +/-)
- Schnurbush Park Trail Network (1.5 miles +/-) and Veterans River Park Trail (1 mile +/-)

The work of the Greenway Study is expanded by the *Four Rivers Waterfront Public Access Plan* which is discussed below.

Four Rivers Waterfront Public Access Plan

Broome County has four rivers: Susquehanna, Tioughnioga, Chenango, and Delaware that cover more than 89 miles of waterway that run through 22 waterfront



Broome County Comprehensive Plan

Building our Future

communities. These communities collaborated on a Local Waterfront Revitalization Plan (LWRP) to create the *Four Rivers Waterfront Public Access Plan*. Through this inter-municipal plan, there are now common goals for waterfront development across the county. These are as follows:

1. Access - Improve public access to all riverfronts
2. Economic Development - Stimulate economic revitalization in Broome County's riverfront communities
3. Community Health - Enhance health and quality of life for all residents and visitors
4. Ecology and Environment - Enhance the biodiversity of the region
5. Flood Control - Sensitively reuse lands prone to flooding
6. Connectivity - Connect communities through their riverfronts
7. Transportation - Establish an intermodal transportation system that connects the riverfronts

By participating in the LWRP process, these waterfront communities can advance projects for funding by New York State.

Susquehanna Heritage Area Management Plan

The Susquehanna Heritage Area was first recognized by the New York State Legislature in 1982 as a vehicle to identify, promote, and develop the historic, cultural, recreational, and natural resources in Broome County. During a 2009 update to the plan, the Susquehanna Heritage Area was expanded to encompass Broome and Tioga Counties.

The goal of the Susquehanna Heritage Area is to use the historic, cultural and natural resources of Broome and Tioga Counties to strengthen regional identity, enhance local quality-of-life, support the local economy, and promote stewardship. This goal is achieved through the partnership and coordinated activities of a wide range of local and regional organizations with technical support from the New York State Heritage Area Program. The following is a summary of the goals and objectives of the updated Management Plan:

Preservation:

- Identify, preserve, protect and enhance historic, buildings, structures, districts, and landscapes within the SHA
- Assist local government and interest groups in developing and implementing resource management tools aimed at protecting the character of historic resources.



Broome County Comprehensive Plan

Building our Future

- Encourage the use of design guidelines to ensure compatibility with neighboring historic structures and sites.

Education:

- Promote public awareness through the thoughtful interpretation of the themes of the Susquehanna Heritage Area
- Develop a coordinated regional system of gateways, wayfinding and interpretive signage to help visitors experience the Susquehanna Heritage Area

Recreation:

- Create an inventory of natural areas, scenic landscapes, and viewsheds to ensure they are protected
- Establish and promote pedestrian, bicycle, and vehicular routes along designated scenic roadways and along corridors linking the historic, recreational, and cultural resources within Broome and Tioga Counties.
- Create enhanced access, usage, and recreational opportunities along the Susquehanna and Chenango Rivers
- Continue improvements and enhancements to multi-use trails, promenades, plazas, parks, streetscapes, and other pedestrian-oriented spaces within the Heritage Area

Revitalization:

- Use heritage resources to promote and stimulate economic activity in village centers and to promote entrepreneurial activity and small business development.
- Strengthen historic community centers through community revitalization initiatives, such as the Main Street program.
- Support local communities in their efforts to promote cultural tourism as a powerful economic catalyst for community improvement and revitalization.

Marketing:

- Develop marketing materials and a cohesive signage and wayfinding program specific to the Heritage Area, including a website that highlights the historic context, interpretive themes, and resources within the Susquehanna Heritage Area.

Partnerships:

- Form partnerships with local, regional, state, and national organizations, agencies, and stakeholders to support the implementation of Management Plan Amendment strategies.



Broome County Comprehensive Plan

Building our Future

Broome County Hotel-Motel Fund

In addition to plans and studies, the County can actively foster change through investments and initiatives. One of the most potentially creative initiatives is the Broome County Hotel-Motel Fund.

Broome County established a dedicated fund for economic development with a 2% occupancy tax on hotel and motel rooms. Through this tax, the County raises approximately \$500,000 per year. Historically, this 'Hotel-Motel Fund' has been split between two broad categories of programs/projects: 1) Brownfield Cleanup and Redevelopment; 2) Economic Development and Marketing. To guide this program, the County Planning Department has issued a policy and application form.

For brownfield sites, three criteria are used to select sites:

Threat to Public Health and Safety

- Known or suspected contamination with exposure route(s) that threaten onsite employees/visitors or offsite businesses and residents
- Deteriorated building condition including imminent collapse or threat to trespassers

Site Control

- County or BCIDA owned
- Imminent County Foreclosure
- Willing participant/Site Access Agreement
- Court order/Temporary Incident of Ownership

Economic Development Potential

- Acreage, commercial zoning, good highway access, adequate utilities, building size and condition, location within an established Brownfield Opportunity Area
- Where County investment will spur development, redevelopment, or increased purchased price at County disposition.

For economic development projects, Hotel-Motel funds are used as follows:

- Aim economic development activities at 4-5 specific high impact industries
- Include entrepreneurship as an important economic development target
- Engage in activities that nourish a diverse population of young, educated workers



Broome County Comprehensive Plan

Building our Future

- Engage in corridor-based land use improvements
- Improve Broome County's land stock by strategically redeveloping brownfield sites and expand infrastructure to support new development in carefully selected locations.
- Transform CBDs into vibrant community cores for business, entertainment, and living.
- Create a single website as the portal for economic development marketing and information
- Organize regularly scheduled marketing missions to regions outside of New York's Southern Tier

And finally, the Hotel-Motel marketing effort has three goals:

- Unite the *Greater Binghamton* community behind a single marketing message
- Build a positive perception of Greater Binghamton as a location for high impact businesses
- Create awareness with site selectors, business owners and entrepreneurs of *Greater Binghamton* as a potential location for relocation and expansion.

The County has in recent years attempted to leverage this small fund with grants and private dollars to maximize its impact. The amount of dollars leveraged is one of the items reviewed by the County in assessing applications by outside agencies for Hotel-Motel funds.

Greater Binghamton Innovation Center

Funded by State and Federal grants, the Greater Binghamton Innovation Center provides affordable office space for entrepreneurs and fledgling companies. Located at 123 Court Street in downtown Binghamton, the Innovation Center has a range of space available from single cubicles up to 688 square foot offices. Tenants receive basic Internet, local phone service, printing/scanning/photocopying and front desk reception services. To date, two businesses have grown up at the incubator and have graduated into privately leased space: White Knight Productions and Virtusphere. White Knight Productions is a video production company, and Virtusphere is the creator of a completely immersive virtual reality system that is used by military trainers and in the entertainment industry. The Innovation Center maintains nearly 100% occupancy.



Broome County Comprehensive Plan

Building our Future

Capital Improvement Plan

Broome County Government uses a capital improvement plan (CIP) to manage its larger infrastructure projects. The CIP lists all proposed projects over a 5 year time horizon. This includes infrastructure such as bridge work and major new buildings, as well as large equipment purchases ranging from dump trucks and loaders to computer servers and IT hardware. Through the CIP process, these expenditures are appropriately budgeted for. Projects proposed for the CIP are all reviewed and ranked by the Planning Department and then approved by a CIP committee consisting of the County Executive, the Director of Management and Budget, the Commissioner of Planning, the Commissioner of Public Works, the Chairman of the Legislature, the Chairman of the Finance Committee and the Chairman of the Public Works Committee.

Through the CIP process, the Planning Department, and the County in general, can guide development to some degree. For example, when a water line was extended up Airport Road to serve the Greater Binghamton Regional Airport and the Broome Landfill (both County-run facilities) there was the potential to spur development into the Airport Corridor. This would be furthered if the County decides to extend sewer lines to the same facilities. By guiding infrastructure investments through the CIP, the County can foster development in specific areas.

Broome County Land Bank Corporation

The Broome County Land Bank is one of 8 land banks established in New York under recently approved enabling legislation. The mission of the Broome County Land Bank is to foster economic and community development by acquiring, holding, managing, developing and marketing distressed, vacant, abandoned and underutilized properties. The Broome County Land Bank has adopted the following goals:

Goals:

- Stem Disinvestment in the Neighborhoods Surrounding Abandoned Properties
- Protect the Public Health and Safety by Securing and Remediating Abandoned Properties
- Return Vacant, Abandoned, and Tax-Delinquent Properties to Productive Use
- Turn Vacant Spaces into Vibrant Spaces
- Provide a Mechanism for Coordinating Reuse of Flood Impacted Properties, Primarily for Hazard Mitigation Efforts
- Promote Increased Levels of Home Ownership



Broome County Comprehensive Plan

Building our Future

The Broome County Land Bank Corporation is expected to begin acquiring properties for redevelopment in late 2013.

Broome County Industrial Development Agency

The Broome County Industrial Development Agency (BCIDA) is a public benefit corporation chartered by the State of New York overseen by a nine member board appointed by the Broome County Legislature. The BCIDA offers companies comprehensive services including needs assessment, site selection, financial incentives, and access to other public-sector programs.

The BCIDA owns and manages a 600 acre corporate park in Conklin, NY, and more than 1.2 million square feet of real estate in the community including the L3 Link Simulation & Training building in Kirkwood, NY, and the BAE Systems building in Johnson City, NY. Over its 35 year history, the BCIDA has facilitated more than 120 projects with a capital investment of more than \$425 million.

The BCIDA is the only Industrial Development Agency operating in Broome County. The County recently created a sister agency to the BCIDA: The Broome County Local Development Corporation. The intent of this county-wide local development corporation is to give the BCIDA an opportunity to fund or participate in projects that would not be eligible for Industrial Development Agency funds.

Because of its extensive resources both in terms of real estate and financial reserves, and its ability to flexibly undertake certain types of projects, the BCIDA is one of the most potent tools available to County decision makers.



Broome County Comprehensive Plan

Building Our Future

Start where you are, Use what you have, Do what you can.

Arthur Ashe

Achieving the Vision

A year of work by County staff, the community, consultants and elected officials culminates with a vision for Broome County. We inventoried our assets, catalogued our deficiencies, did an extensive survey, held workshops, met with stakeholders and most of all we listened. We asked the community to imagine that they are a resident of the county 10 years from now, the comprehensive plan is done and implemented to great success, and they are writing a letter to a friend or family member who does not live here. In this letter we asked residents to tell us how do you want to be able to describe Broome County? This is what the community said:

The Vision: Our residents make Broome County an inviting place to live, work and play. Our students and young professionals are fully engaged in the community. We take pride in our safe, vibrant, attractive urban and village centers and the scenic beauty that surrounds our rural towns and villages. Because we proactively invested in our legacy sites, new ventures now flourish on former brownfields. Our healthy communities are sustained because municipalities have made a commitment to high standards in community services and building design and renovation.

Broome County communities remain strong and resilient in the wake of natural disasters and other challenges through our capacity for cooperation and by incorporating sound planning in all facets of public decision making.

With our partners in education, Broome County invests in our workforce, entrepreneurship, and innovation to continue our legacy as a leader in high technology development. As the birthplace of IBM and the simulation industry, we know the importance of fostering diverse, newly emerging industries such as renewable and clean energy, green technology, and advanced healthcare.

This vision statement encapsulates the aspirations of the community, and we now lay out vision items and an action plan.



Broome County Comprehensive Plan

Building Our Future

Vision Item 1:

Making Broome County an Inviting Place To Live, Work, and Play

From numerous stakeholder groups, community meetings and survey responses, the message was clear: Make Broome County More Vibrant. At one stakeholder meeting, when asked how people *wanted* to describe their community, in unison the majority of the group enthusiastically said ‘vibrant’. They wanted us to create a buzz.



We have a great base to build upon. We have intact downtowns, and historically and architecturally significant buildings. We need to enhance and enliven these places. One method would be to add public art. The County can look at our facilities and infrastructure as canvases. Even public transit busses can become mobile works of art. For the past 13 years, Valley Metro in Phoenix has had an annual ‘Do the Ride Thing’ contest, where high school students compete to design a transit wrap. Imagine if we had a ‘Wrap the Ride’ contest here and invited Binghamton University and local high school art students to design the bus wrap: We brighten the community and engage our students. We can also add landscaping to new development, something that respondents to our survey thought was important.

We have nodes, such as Washington Avenue and the village green in Windsor, which have the potential to be great, inviting public spaces. We just need to add more people. We can do this by growing existing events like the Windsor “Window on the Arts” and the Johnson City “Carousel Days” and by sponsoring new ones throughout the year. More than one stakeholder we interviewed encouraged the development of a festival to bring more life to the winter months. The arts and events have a tremendous economic impact on the community, and we need leverage this to maximum effect.



Broome County Comprehensive Plan

Building Our Future

The Village of Johnson City recognizes the need for the arts to be part of their downtown through their recently adopted Health and Cultural District plan. We should partner with the Village to implement their ideas.

Vision Item 2:

Engaging Our Students and Young Professionals

Two-thirds of survey respondents believe that residents leaving the area is an obstacle to achieving our vision for Broome County. And this drain is most prevalent among local students going off to college and settling elsewhere. Also students attending class at SUNY Broome or Binghamton University typically do not remain after graduation. Engaging these students and other young professionals is one key to achieving our vision. And the students want to be more engaged.

Graduate students participating in the stakeholder meetings for this plan voiced strong support for more opportunities to volunteer and participate in local civic life. By participating, students become woven into the local fabric and not just outsiders living here temporarily. We also need to provide the amenities and housing opportunities that appeal to students and recent graduates. They want more places to gather, socialize, and network which are not related to the bar scene. The Binghamton University Downtown Center could serve as a nucleus for this, but it is currently not welcoming for students to use after hours. Binghamton University currently holds an annual Internship and Job Fair, but the County can do more to expand and promote this effort. We can also develop other opportunities to engage students from both campuses in civic life. Examples include the having student led bands participate at the Farmer's Market Brown Bag music series, organizing students to design and execute murals and other public art, and encouraging student participation in neighborhood cleanups and other volunteer activities. The annual Riverbank Cleanup carried out by the Environmental Management Council is a model for this type of effort.

Engaging young professionals in decision-making and leadership roles is also important. Respondents to the comprehensive plan survey expressed concern that for decades decisions have been made by a relatively small group of individuals. We should make a concerted effort to include young professionals on boards such as the

Why Attachment Matters

The Knight Foundation has done an extensive study of 'community attachment'. Over the three years, of the *Soul of the Community* study, Knight Foundation researchers found that communities whose residents were more attached saw greater economic growth. And the three greatest drivers of community attachment in this study were: 'Social Offerings', 'Openness' and 'Aesthetics'.



Broome County Comprehensive Plan

Building Our Future

Broome County Industrial Development Agency, Southern Tier Economic Partnership (STEP), Broome County Land Bank, and the Broome County Arena and Forum Board of Directors. This new blood will bring fresh ideas and foster a sense of investment in the community by young professionals.

Vision Item 3: Taking Pride in Our Urban and Village Centers

Broome County is fortunate to have intact and lively urban and village centers. Some villages, like Whitney Point and Johnson City, have been aggressive in winning grants to foster improvements. But all the villages need attention and investment. As shown in the *Housing* chapter, the villages have a very high concentration of substandard and pre-war housing. Grants to improve housing conditions can be leveraged with much needed streetscape, commercial facade improvements, and small business loans and grants to make the village centers attractive, vital nodes of activity and civic life.

These physical improvements when teamed with coordinated marketing efforts for the village centers will foster private interest and investment. Windsor and Deposit have led the way in marketing themselves outside of the region, and we need to extend these efforts to the other village centers. This should include internal marketing as well to help restore community pride and combat negativity. As quality of life improves, and pride grows, the villages will become attractive hubs for visitors and prospective residents.

As we combat blight in our village centers, we also must pay attention to the corridors and entrances identified in the *Land Use* chapter. In these high profile areas we should seek façade grants, work with local officials to target code enforcement, and coordinate development efforts with the newly established Broome County Land Bank. By targeting these highly visible areas, we will greatly leverage our investment of time and resources.

Building Our Future Principles:

- The community must be resilient
- Present needs must be met without compromising our ability to meet future needs
- Limited resources should be conserved and leveraged
- Natural and cultural resources should be preserved and enhanced
- Public health and healthy communities should be promoted through planning tools and strategic public investments
- Collaboration is key



Vision Item 4: Taking Pride in Our Scenic Beauty

Scenic beauty and abundant natural resources are among our biggest strengths. Survey respondents confirmed this: 84% identified “protecting open space” as a major or minor opportunity and 88% identified our “rivers and riverfronts” as a major or minor opportunity. And just as we plan for our traditional, gray infrastructure so should plan for our “green infrastructure” in recognition of their important public health and community service functions.

Green infrastructure provides flood mitigation, alternative transportation corridors, and recreational amenities. It can also link open spaces to major activity centers, such as schools, community centers, and business districts while improving aesthetics and quality of life.

We have done a great deal to protect and preserve our natural beauty. We have an adopted countywide Local Waterfront Revitalization Plan and a Greenway Plan. We have miles of pedestrian and bicycle trails in place and more that have been funded. But there is more that we can and should do. We need to expand and strengthen the linkages between open spaces hubs and urban and village centers in order to create an integrated transportation and recreation network.

And we are missing an economic development opportunity by not heavily promoting all of the recreational resources in the community with a comprehensive outdoor recreation marketing strategy. Broome County is under-represented in outdoor oriented publications and websites. Our marketing strategy could include smart phone apps, GPS enabled hiking trail maps, tying into existing clubs and organizations such as the Triple Cities Hiking Club and social media to promote recreation oriented events. But first, we must assess and fill in the gaps associated with data regarding outdoor recreation opportunities.

We recognize the importance of agriculture both economically and as part of the character of the county. Promotion of agriculture will generate spending and investment by farmers and their suppliers across the economic base of the county, and farmers place very limited demand on infrastructure and municipal services. Agriculture is important for maintaining open space and our rural character. Supporting the agricultural community keeps these farms a productive part of our economy. But our Agricultural Economic Development Plan is now more than 10 years old and needs to be updated.



Vision Item 5: Investing In Our Legacy Sites

Nearly 90% of survey residents want to see infrastructure projects concentrated in the Triple Cities (Binghamton, Endicott and Johnson City) as a means of guiding where development takes place. Survey respondents also wanted to see industrial and commercial development concentrated in the Triple Cities, the smaller village centers and the larger suburban towns. Only one quarter of respondents wanted to see this type of development take place countywide including the rural areas.

Residents recognize that concentrating infrastructure saves tax dollars in the long run by allowing the County to focus on maintaining existing systems. But this approach takes more planning and forethought because there is a lack of developable sites within these areas. The majority of our available industrial building stock is not suited to modern manufacturing. It is older and does not have high bay space, and this is restricting new development opportunities. And some significant sites, like the former BAE Systems site in Johnson City and the former Vestal Nursing Center site in Vestal, need special attention because they are flood prone. BAE will soon be demolished, but the former Vestal Nursing Center may deteriorate as it sits idle. We need to develop reuse plans for these ‘bluefield’ sites which allow for their redevelopment while mitigating flood risk.

We need to continue to aggressively assess, remediate, assemble and prepare our legacy sites for redevelopment. And we should use all the mechanisms available, such as New York’s Shovel Ready program and the recently established Broome County Land Bank, to market and redevelop sites.

Vision Item 6: Making a Commitment to High Standards in Services

We need to make a commitment to providing high quality services which take advantage of the latest innovations in social entrepreneurship and technology. We can begin by launching a 21st century website which is welcoming to new residents and business owners. This site would encourage tourism and be tied to successful local social media efforts such as BingSpot. We are the ‘Home to Innovation’ and we should look like it. Millennials expect a government website which accepts payments online, allows residents to reserve parks pavilions, and routes questions and concerns to appropriate departments. This fresh, vibrant portal would also enable county administration to track complaints that have been filed to ensure that there is appropriate follow up. If thoughtfully implemented, an advanced website would keep costs down by streamlining government services.



Broome County Comprehensive Plan

Building Our Future

Our commitment to high quality services must extend to our growing aging population. As the population grows grayer, there are many services that must be sustained and enhanced to ensure that our residents maintain their quality of life as they attempt to age in place. Some, like health care, are obvious, but others may not be so apparent. For example we need to improve our public transportation system to assist the growing pool of retired residents in the rural and suburban towns as they become unable to drive themselves. Transportation related issues are consistently in the top reasons older adults call Broome County's Senior Resource Line. An improved public transportation system will also help job seekers find and maintain employment, a point made to us by the high school students involved in Citizens U.

Vision Item 7: Making a Commitment to High Standards in Building Design and Renovation

We can have the community we want if we expect excellence. When projects are proposed, we should require them to be carried out to the highest standards in architectural design. The higher we set the bar, the more investment we will attract. We can work with local officials to develop design standards for critical areas such as village centers and high profile transportation corridors.

The county can achieve this goal by strategically investing in premier sites that add value to the community. We have a once in a generation opportunity to carry out a project at a high level of architectural excellence. The Broome County Industrial Development Agency has taken ownership of one of the landmark buildings in Binghamton's downtown: the former Carnegie Library on Exchange Street. This gem is on the State and National Register of Historic Places, but it has sat vacant for over a decade after a developer bought it and failed to follow through on his promises to renovate the property for upscale development. With the library back in public control, we should pursue grant funds to bring the shine back to this jewel.

Another means of creating a quality community is by adopting a 'Complete Streets' policy where we consider all modes of transportation: bicycle, pedestrian, and vehicle when reviewing and designing projects. The number one request from the comprehensive plan survey to consider when conducting site plan reviews was including pedestrian and bicycle amenities such as convenient sidewalks, benches and bike racks, showing that the community supports this approach.



Broome County Comprehensive Plan

Building Our Future

Vision Item 8: Becoming More Resilient

As a community, we have become experts in responding to the aftermath of major floods, but now our focus must turn to actions that protect our residents, businesses and institutions from future events. Our towns, villages and public institutions have done much to mitigate against future disasters through selective buyouts of residential properties, improving our infrastructure, and constructing floodwalls to protect critical facilities such as Lourdes Hospital and the Union-Endicott High School. Projected increases in the amount of precipitation and the frequency of significant storms requires us to adapt to changing conditions. We can become a more resilient community by further incorporating hazard mitigation planning concepts into decision making, instituting policies that protect property and public safety, and encouraging natural, non-structural solutions to reducing flood damages.



**BROOME COUNTY
FLOOD TASK FORCE**

As we make land use and capital investment decisions, we should review projects with hazard mitigation in mind. This can include making it Planning Department policy to provide comments as part of the 239 review process that require proposed developments become more disaster resistant. In addition, we should integrate flood mitigation and stormwater management projects and policies into the County's annual Capital Improvement Plan.

All communities in Broome County participate in the National Flood Insurance Program, but only Johnson City and the Town of Union are part of FEMA's Community Rating System. Through the Community Rating System program, residents and business owners receive reduced flood insurance rates because their communities take a comprehensive approach to floodplain management and work to reduce flood damage to insurable properties. Related to this, all communities in Broome County have floodplain development ordinances, but none have adopted the more stringent No Adverse Impact standards that would be more protective of property. These programs are complex and difficult to initiate, and require a great deal of technical assistance, education, and advocacy. The Broome County Flood Task Force is one venue for initiating these programmatic and policy changes. But we should continue to reach out to the business community through the Chamber of Commerce, the local chapter of the Bar Association, the Board of Realtors and other appropriate venues to educate businesses, attorneys, realtors, and others about



Broome County Comprehensive Plan

Building Our Future

concepts such as flood insurance, individual property hazard mitigation, and contingency planning during a flood to keep businesses running.

Vision Item 9: Investing In Our Workforce, Entrepreneurship, and Innovation

It is hard to imagine today's society without the technological advances that came out of Broome County businesses. These include a century of innovation at IBM, the virtual reality and simulation industries which were borne out of Link Aviation and its daughter companies, and significant contributions to the space program and defense industries by local technology firms that maintain a strong presence here. What are we doing to cultivate the next crop of entrepreneurs?

Like any greenhouse, we must tend to the infrastructure of innovation in order to create an entrepreneurial ecosystem. Community groups, private industry, and the public sector have done quite a bit to sow the seeds for the next generation of innovators. For nearly 30 years, the Southern Tier Imaginink Celebration of Invention and Art has hosted art shows and invention conventions at many local venues. Over 20,000 students have invented solutions to their problems since the program

Boston Innovation District: Core Principles & Strategies

Work: Create Clusters of Innovative People

People in clusters innovate at a quicker rate, sharing technologies and knowledge easier. **Ideas need a tight ecosystem** to foster creative growth – distance equals death. These Innovation District clusters become the new economic engines for the region, retaining homegrown talent from the surrounding city and intellectual institutions.

Live: Build Flexible Housing Options to Work for Flexible Lifestyles

The entrepreneur who is never at home because she's at the lab all night or developing a new program with her co-founders, needs an apartment that meets her lifestyle demands and budget and is near her office. The City of Boston works closely with design professionals and developers to produce a palette of new housing options to fit the range of lifestyles and needs of the innovation workforce.

Play: Provide Public Space and Programming To Foster An Innovation Ecosystem

An **abundance of collaborative venues and open space** is critical to fostering the creative process. The Innovation District will offer unparalleled opportunities to organically grow projects and networks among entrepreneurs.



Broome County Comprehensive Plan

Building Our Future

began. A creative team of local individuals has started the Center for Technology & Innovation to celebrate and memorialize the technological advances that we have made here. Broome County supports business start ups by managing a small incubator on Court Street. The County has partnered with Binghamton University and the Broome County Industrial Development Agency to build a top-tier incubator in downtown Binghamton. The City of Binghamton has an annual business plan competition and a 'Start Up Weekend'. The Town of Union's 'Emerging Enterprise Emerging Market Entrepreneurial Program' (E³) encourages research and

"People always say, 'How long does our stuff last?'" said Chuck Hinton, a McIntosh employee. "We don't know how long they last. We've only been making them for 63 years."
-from a CBS News report

development in emerging fields and improve upon existing technologies. New York State recently announced the 'Start Up New York' program to "foster entrepreneurialism and job creation on a large scale by transforming public higher education through tax-free communities across the state, particularly upstate."

We can go further. We can organize a 'Maker's Faire' or similar event here to foster experimentation and inventing for all ages to raise the awareness of the importance of local entrepreneurs and innovators to our economy. We should also investigate establishing a venture fund for start up companies being created at SUNY Broome and Binghamton University.



But our biggest idea is to join the elite cities of the world like Barcelona and Boston and create 'Innovation Districts' to establish a creativity eco-system. Each iDistrict would work to: Create Clusters of Innovative People; Build Flexible Housing Options that Work for Flexible Lifestyles, and Provide Public Space and Programming To



Broome County Comprehensive Plan

Building Our Future

Foster An Innovation Ecosystem. We will work with the State and Local development entities to offer a targeted suite of incentives to innovators and entrepreneurs in each iDistrict.

One Innovation District (iDistrict) would be centered on the high-technology incubator proposed for Hawley Street in downtown Binghamton. This iDistrict would focus on technology transfer from Binghamton University into the commercial sphere. A second iDistrict would be centered on the Wilson Hospital campus in Johnson City and would be focused on innovations in health care, senior living, and the Johnson City Health and Culture District. A third iDistrict would be centered on the Huron Campus and the Endicott Municipal Light District, and would use the combination of ample low cost manufacturing space and discounted electricity to support electronics manufacturing firms.

These ambitious ideas and many more are included in the Action Plan Matrix. The Action Plan Matrix establishes what we will do, who is responsible, where it will take place, when they will start, and how we will pay for it. These actions will only be successful through a serious commitment to their implementation by the county in close collaboration with our public and private sector partners. Only with diligent follow through will we be able to *Build Our Future*.

Vision Item 1: Making Broome County an Inviting Place To Live, Work, and Play

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Support Small Retail and Restaurants through Economic Development Incentives	Focus on Urban and Village Centers and Key Gateways and Transportation Corridors	Partnership with BCIDA, BLDC and Union LDC	Continued Effort	CDGB Small Cities Grants, NY Main Street Grant
Support and submit grant applications for the renovation of substandard housing, with an emphasis on health and safety, water quality, lead abatement, and issues related to 'Aging in Place'.	Focus on Urban and Village Centers and Key Gateways and Transportation Corridors	Planning Department in partnership with Municipalities non-profit housing providers	Within 1 years	DHCR Grants and CDBG Small Cities Grants
Promote elder-friendly suburbs through universal design, zoning for accessory dwelling units [granny flats], walkable communities, enhanced rural transit	Suburban communities	Planning Department in partnership with Municipalities, NYSDOT and BMTS	Within 3 years	No cost
Prepare and promote model ordinances to encourage public art, pop up stores, food trucks, outdoor seating at restaurants, and other land uses which create vibrant places.	Focus on Urban and Village Centers	Planning Department	Within 1 Year	No cost
Use our low cost housing to attract and retain artists, entrepreneurs, and retirees	Countywide	Partnership with BCIDA, Greater Binghamton Chamber, BLDC and Union LDC	Within 3 Years	Refocus existing efforts
Consider developing minimum standards for allowing participation in auctions of County foreclosed properties including barring individuals who have a history of code violations or delinquent taxes.	Countywide	Planning Department, local Code Officials, Broome County Land Bank, and Department of Real Property	Within 3 Year	No Cost
Support Events and Festivals including a Winter Festival	Focus on Urban and Village Centers	Partnerships with Local Municipalities, Community Groups, Local Museums and Historical Sites, Event Organizers	Continued Effort	Sponsorships, advertising and fees, I Love NY grants, USDA Grants and National Endowment for the Arts grants

Vision Item 1: Making Broome County an Inviting Place To Live, Work, and Play

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Foster Public Art	Focus on Urban and Village Centers and Key Gateways and Transportation Corridors	Partnership with Municipalities, BU, Community Leaders, Businesses, Arts and Performing Arts Groups	Within 3 Years	State Parks and Heritage Area Grants; National Endowment for the Arts, NY Council on the Arts, Local Business Sponsorship, Private Foundation Support

Vision Item 2: Engaging Our Students and Young Professionals

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Encourage development of 'gathering places' for BU and SUNY Broome students in the community	Urban Centers	Partnership with SUNY Broome and BU	Within 5 Years	Regional Economic Development Council funding
Expand and Promote SUNY Broome and BU Internship and Job Fairs	SUNY Broome/BU Campuses	Partnership with SUNY Broome and BU	Continued Effort	Limited or No cost
Name young professionals to decision making boards such as the BCIDA, STEP, Broome County Land Bank, and the Broome County Arena and Forum Board of Directors	Countywide	Broome County and Local Decisionmaking Boards	Within 1 Year	No Cost
Designate a County liaison to Binghamton University and SUNY Broome student populations to provide for meaningful ongoing engagement of students.	Countywide	Broome County	Within 1 Year	No Cost
Sponsor neighborhood clean up, public art/murals, and other SUNY Broome and BU student volunteer opportunities	Countywide, focus on Urban and Village Centers	Partnership with SUNY Broome and BU and event organizers	Within 1 Year	Limited or No cost
Enhance opportunities for alternative transportation.	Focus on Urban and Rural Village Centers and Key Gateways and Transportation	Broome County, BMTS and Local Municipalities	Within 5 Years	Federal and State Transportation Grant Funds
Include student led music groups in the Farmer's Market Brown Bag series and similar events	Urban and Rural Village Centers	Partnership with SUNY Broome and BU and event organizers	Within 1 Year	No Cost

Vision Item 3: Taking Pride in Our Urban and Village Centers

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Support and submit grant applications for streetscape, bike and pedestrian amenities, housing development, commercial investment, and façade improvements in our rural villages and urban centers. Example project: Binghamton Gateway Homes development on Front Street.	Focus on Urban and Rural Village Centers and Key Gateways and Transportation Corridors.	Broome County Planning in Partnership with Urban and Rural Village Centers	Within 1 Year	New York Main Street Program, Community Development Block Grant Small Cities Program
Support and help coordinate marketing efforts for the rural village centers. These efforts should include internal as well as external marketing.	Rural Village Centers	Broome County Planning in Partnership with Urban and Rural Village Centers	Continued Effort	Hotel/Motel Marketing Funds, Greater Binghamton Chamber of Commerce, I Love NY Funds
Combat blight in primary and secondary corridors and gateway areas through enhanced code enforcement and grant-funded façade improvement programs.	Focus on Urban and Village Centers and Key Gateways and Transportation Corridors	Broome County Planning in Partnership with Urban and Rural Village Centers	Within 1 Year	New York Main Street Program, Community Development Block Grant Small Cities Program
Support the Johnson City Health and Cultural District	Johnson City	Broome County Planning in Partnership JC Partners, Village of Johnson City and others	Continued Effort	No cost
Recognize the importance of major commercial centers and explore ways to foster improvements in underutilized shopping plazas.	Focus on Urban and Rural Village Centers	Broome County Planning in Partnership with Urban and Rural Village Centers	Within 1 Year	New York Main Street Program, Community Development Block Grant Small Cities Program
Better coordinate the efforts of the Greenway and the Susquehanna Heritage Area to more fully integrate historic, cultural, agricultural and natural resource management and marketing.	Within Susquehanna Heritage Area	Broome County Planning, BMTS and SHA Advisory Board and Commission	Within 1 Year	No cost
Develop virtual walking, alternate transportation, driving and public transit 'tours' of historic, natural and cultural resources.	Focus on Urban and Rural Village Centers	Broome County Planning in Partnership with Urban and Rural Village Centers	Within 5 Years	I Love New York and Heritage Area Funding
Utilize site plan review to enhance public safety through proper design and utilization of the built environment. This can include natural surveillance, natural access control, territorial reinforcement and proper maintenance to reduce the incidence and fear of crime.	Urban Centers	Broome County Planning	Within 1 Year	No cost

Vision Item 4: Taking Pride in Our Scenic Beauty

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Work with local municipalities on comprehensive plan updates and zoning ordinance amendments to address mancamps, long term use of campgrounds, rural rental housing, storage lots, and other projected impacts associated with high-volume hydrofracturing.	Focus on Rural Towns	Broome County Planning in Partnership with Municipal Attorneys and local Planning and Zoning Boards	Within 1 Year	No cost
Prepare a plan for Broome County Parks to govern their development, use and maintenance	Countywide	Broome County Planning Lead with Assistance from Consulting Firms	Within 5 Years	Broome County Planning Professional Service Budget Line
Update the Broome County Agriculture Economic Development Plan	Countywide	Professional Planning Firm Lead, Assistance from Broome County Planning	Within 3 Years	NYS Ag and Markets Funding
Actively pursue the goals and projects identified in the Local Waterfront Revitalization Plan, the Greenway Plan, and the Susquehanna Heritage Area Management Plan	Within LWRP, Greenway and SHA Focus Areas	Broome County Planning, Local Municipalities, BMTS, Heritage Area Commission	Continued Effort	State Parks, State LWRP, Transportation Alternatives Program, Heritage Area
Solicit community input and participation to identify significant resources that are not well documented	Countywide	Broome County Planning	Within 3 Years	No cost
Assess and fill in gaps in data regarding outdoor recreation opportunities	Countywide	Broome County Planning	Within 3 Years	No cost
Heavily market recreational opportunities, including use of social media, advanced smart phone and GPS enabled mapping and existing organizations and venues	Countywide	Broome County Planning, NYS DEC, Broome County Chamber of Commerce	Within 5 Years	I Love New York
Improve access to recreational and scenic resources through promotion and additional infrastructure such as boat launches, fishing access sites, and increased signage	Countywide	Broome County Planning, NYS DEC, Broome County Chamber of Commerce	Within 3 Years	LWRP and State Parks
Support businesses that provide services and enhance the use of scenic and open space resources such as fishing and hunting guides, canoe and kayak sales/rentals, bicycle shops, and cross country ski shops.	Urban and Rural Village Centers	Broome County Planning, BCIDA, Union LDC and Binghamton LDC	Within 5 Years	CDBG MicroEnterprise, BCIDA, Union LDC and Binghamton LDC
Evaluate opportunities for integrating historic preservation into the open space network	Countywide	Broome County Planning and Heritage Area Commission	Within 3 Years	No cost

Vision Item 4: Taking Pride in Our Scenic Beauty				
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Educate the community and decision makers on the importance of scenic and recreational resources	Countywide	Broome County Planning	Within 3 Years	No cost
Promote the use of regulatory tools to protect valuable natural resources such as conservation easements, ridgeline overlay districts, conservation subdivisions, stream buffers, and enhanced floodplain development standards.	Countywide	Broome County Planning	Within 3 Years	No cost
Promote, protect, and enhance agriculture through the Ag District program, continuing to involve the farming community in decision making, and support of the Greater Binghamton Farmer's Market	Countywide	Broome County Planning in Partnership with Cornell Cooperative Extension and NY Ag and Markets	Continued Effort	No cost
Work to better integrate local agriculture into the local business community.	Countywide	Broome County Planning in Partnership with Cornell Cooperative Extension and NY Ag and Markets	Continued Effort	No cost
Provide more training for local officials including planning and zoning boards, assessors, and code officials on issues related to agriculture.	Countywide	Broome County Planning in Partnership with Cornell Cooperative Extension and NY Ag and Markets	Continued Effort	No cost

Vision Item 5: Investing In Our Legacy Sites				
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Develop reuse plans for 'bluefield' sites such as the Vestal Nursing Center, the former Gander Mountain store, and the BAE site where redevelopment is <u>compromised due to potential for flooding</u>	Select sites including but not limited to Vestal Nursing Center, Gander Mountain, and BAE	Consulting Firm	Within 5 Years	Planning Department Professional Services Budget, NY Rising Fund, Other Grant Funds
Develop reuse plans for prominent brownfield sites	Within EJ and Brandywine BOA	Consulting Firm	Continued Effort	NY BOA funds
Participate in the NYS Shovel Ready program	Emerson Business Park and Broome Corporate Park	Planning Department with assistance for Consulting Firms if needed	Within 1 Year	Planning Department Professional Services Budget and BCIDA
Complete Endicott Johnson Brownfield Opportunity Area Step III	EJBOA Study Area	Planning Department and Planning Consulting Firm	Continued Effort	NY BOA funds
Complete Brandywine BOA Step II	Brandywine BOA Study Area	Planning Department and Planning Consulting Firm	Continued Effort	NY BOA funds
Collaborate with other Brownfield Opportunity Area initiatives in Broome County	First Ward and Northside BOA Study Areas	Binghamton Planning and Planning Consulting Firm	Continued Effort	NY BOA funds
Assess, assemble, remediate and market select brownfield sites through the Broome County Land Bank and other appropriate means	Focus on BOA study areas and proposed iDistricts	Planning Department with appropriate environmental and engineering consulting firms in partnership with BC Land Bank, BCIDA and others	Continued Effort	NY BOA funds, EPA Assesment and Clean Up Grants, Office of Attorney General Community Revitalization Initiative Funds
Promote the reuse of legacy sites through community workshops and an educational campaign	Countywide	Planning Department	Within 3 Years	No cost
Consider offering incentives for the redevelopment of vacant and underutilized sites. This can include financial incentives and streamlined permitting. One mechanism would be to establish a fund to underwrite the cost of tipping fees associated with demolition or redevelopment for key projects or in select areas.	To Be Determined, but possible focus on BOA Study Areas and proposed iDistricts	Planning Department and Broome County Solid Waste, BCIDA, and other partners such as municipal planning departments and local development corporations.	Within 3 Years	Hotel/Motel Brownfield Cleanup Fund, Broome County Solid Waste, BCIDA and others
Explore providing temporary community uses on sites owned by the Broome County Land Bank until private investment is secured.	Major sites aquired by the Broome County Land Bank	Broome County Land Bank	Within 3 Years	Broome County Land Bank, Limited or No Cost

Vision Item 6: Making a Commitment to High Standards in Services

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Upgrade web presence to include online bill paying and complaint management	Countywide	Broome County IT with Consultant	Within 1 Year	Broome County General Fund
Develop and market one online web portal for economic development	Countywide	Planning Department and BCIDA	Within 1 Year	BCIDA
Link online web portal to database of available sites and GIS information	Countywide	Planning Department and BCIDA	Within 3 Year	No Cost
Investigate ways to improve public transportation to accommodate the aging in place population and to assist job seekers in finding employment.	Countywide	BMTS, Broome Transit and possible partners with Tioga County Transit, Binghamton University and others	Within 3 Years	Shared service agreements, Advertising revenues, Appalachian Regional Commission Grant, Federal Transit Administration <u>Planning Grants</u>
Position Broome County to be a leader in health care across the generational spectrum by integrating health care providers, fostering rural health care, supporting senior living communities and implementing cutting-edge health care technology.	Countywide	Broome County Health Department, Broome County Office for Aging, Mothers and Babies, Perinatal Network, Rural Health Network of South Central New York, United Health Services, Our Lady of Lourdes Hospital	Continued Effort	Community Transformation Grant, Fall Prevention Grant, Mobility Management Grant
Integrate SEQR requirements and natural resource inventories into online GIS to give local decisionmakers adequate information when assessing project impacts.	Countywide	Planning Department	Within 1 Year	No Cost
Continue to explore opportunities for cost savings through shared services.	Countywide	Local Municipalities	Continued Effort	NY DOS funding
Provide online clearinghouse of local zoning and land use codes.	Countywide	Planning Department	Continued Effort	No Cost
Develop an online manual to clearly state the process and standards for 239 review.	Countywide	Planning Department	Within 1 Year	No Cost
Provide data and guidance to appropriate law enforcement agencies to support Problem Oriented Policing and other technologically advanced methods to reduce crime and combat the perception of crime.	Within Urban Core Communities	Planning Department	Continued Effort	Intermunicipal Agreement and Department of Justice Grants
Provide periodic updates to the Comprehensive Plan to ensure it remains relevant	Countywide	Planning Department	Within 5 Years	Limited or No Cost

Vision Item 7: Making a Commitment to High Standards in Building Design and Renovation				
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Consider commissioning a Historic Residential Property survey to determine National Register eligibility for state and federal rehabilitation tax credits for qualified owner-occupied historic homes. (similar to the Broome County sponsored Industrial Property Survey	Within target areas determined by concentration of potential historic homes	Planning Department with Historic Preservation Consultant	Within 5 Years	Broome County Planning Department Professional Service budget in partnership with select municipalities
Work with local municipalities to establish design guidelines in key gateways and business districts	Focus and Rural Village Centers	Planning Department	Within 3 Years	No cost
Develop and adopt a 'Complete Streets' policy at the County level	Countywide	Planning Department and Broome County DPW	Within 3 Years	No cost
Expect excellence in building and site design, and develop County design standards for key gateway areas. Make comments through the 239 review process to implement these standards.	Countywide with focus in Urban and Rural Village Centers, key gateways, and transportation corridors	Planning Department	Continued Effort	No cost
Incorporate pedestrian and bicycle amenities into land use design review [239] comments	Countywide with focus in Urban and Rural Village Centers and sites in proximity to Greenway projects	Planning Department	Continued Effort	No cost
Integrate stormwater controls that mimic natural water flow at new County facilities and retrofit existing facilities as appropriate.	County facilities with focus on Flow Management area(s)	Planning Department with Engineering Consultant	Within 1 Year	NY Green Infrastructure Fund
Support the recommendations, strategies and actions identified in the Susquehanna Heritage Area Management Plan Amendment which provide the framework for implementing and achieving the Plan's vision, goals and objectives of <i>Preservation and Stewardship; Interpretation and Education; Recreation and Natural Resources; Economic and Community Revitalization; Marketing and Promotion; and Partnerships and Collaboration.</i>	Within Susquehanna Heritage Area communities	Planning Department, Heritage Area Commission, Local Municipalities, Local Non Profits	Continued Effort	New York Heritage Area funding
Develop a County strategic energy plan which integrates energy efficiency features and policies at County facilities.	County facilities	Broome County Energy Office with Broome County Facilities and Planning	Within 1 Year	Broome County Energy Office Professional Service (if needed)
Improve the County Highway Work Permit process to consider stormwater management, Complete Streets, and other design standards.	Countywide	Broome County DPW and Planning Department	Within 1 Year	No cost

Vision Item 8: Becoming More Resilient				
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Encourage the application of No Adverse Impact Floodplain Management strategies	Floodplain and otherwise flood impacted areas	Planning Department Flood Task Force Local Municipalities	Continued Effort	No Cost
Encourage natural, non-structural solutions to reducing flood damages	Floodplain and flood impacted areas	Planning Department Flood Task Force Local Municipalities Broome-Tioga Stormwater Coalition	Continued Effort	FEMA HMGP program EFC Green Innovation Grant Program NYSDOS LWRP - Watershed Studies
Make open space/natural resource data readily available to municipalities, developers, and general public through the establishment of GIS data and tools for that purpose.	Countywide	Planning Department - Planning and GIS Division Environmental Management Council	Continued Effort	No Cost
Establish contingency plan for use during a flood or other disaster to keep County operations running	Countywide	Emergency Services Public Works Information Technology	Within 1 year	No Cost
Educate the business community about contingency planning during a floods to keep businesses running	Countywide	Greater Binghamton Chamber Flood Task Force	Continued Effort	No Cost
Encourage development practices that help achieve inflow and infiltration reduction goals establish through the flow management process (i.e. green infrastructure practices, strategic open space preservation)	Countywide	Planning Department Flood Task Force Local Municipalities Broome-Tioga Stormwater Coalition Environmental Management Council	Continued Effort	FEMA HMGP program EFC Green Innovation Grant Program NYSDOS LWRP - Watershed Studies NYSDEC Urban Forestry Grants
Look for opportunities to incorporate water resource protection into Capital projects and retrofit County Facilities for this purpose	County facilities and infrastructure	Planning Department Public Works Parks Department	Within 1 year	EFC Green Innovation Grant Program NYSDEC Water Quality Improvement Program
Incorporate water resource protection best practices into county infrastructure improvements (road maintenance, sewer maintenance, etc.)	County infrastructure	Planning Department Public Works Parks Department	Within 3 years	EFC Green Innovation Grant Program NYSDEC Water Quality Improvement Program

Vision Item 8: Becoming More Resilient				
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Implement demonstration projects on County properties to promote and encourage green infrastructure and energy efficiency, and ensure that these actions are well marked and marketed.	County facilities and infrastructure	Planning Department Public Works Parks Department	Within 1 year	EFC Green Innovation Grant Program NYSDEC Water Quality Improvement Program
Integrate flood mitigation and stormwater management projects and policies into County capital improvement planning process	County facilities and infrastructure	Planning Department Public Works Parks Department	Within 1 year	EFC Green Innovation Grant Program NYSDEC Water Quality Improvement Program
Support/undertake watershed based analyses to identify intermunicipal opportunities for water quality restoration/ flood attenuation and implementation of identified projects	Countywide	Planning Department	Within 3 Years	NYSDOS LWRP - Watershed Studies NYSDEC Water Quality Improvement Program FEMA HMGP program
Work closely with USACE on Upper Susquehanna Watershed Management Plan	Regional	Planning Department Flood Task Force	Continued Effort	No Cost
Promote and coordinate participation in FEMA's Community Rating System	Flood impacted municipalities	Planning Department Flood Task Force	Continued Effort	No Cost
Ensure that local zoning ordinances allow for alternative energy	Countywide	Planning Department Local Municipalities	Continued Effort	No Cost
Provide comments on land use [239] reviews that encourage appropriate floodplain activities and reference preliminary FEMA floodplain mapping.	Countywide	Planning Department	Continued Effort	No Cost
Utilize the Flood Task Force, the Chamber of Commerce, the BC Bar Association, the Board of Realtors and other interested parties to educate the community about flooding, flood insurance, stream and river functions, flood mitigation and contingency planning	Countywide	Planning Department Local Municipalities	Continued Effort	No Cost
Staff to become a Certified Floodplain Manager	Countywide	Planning Department	Within 3 Years	No or Limited Cost

Vision Item 9: Investing In Our Workforce, Entrepreneurship and Innovation

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Develop three Innovation Districts [iDistrict] to foster an entrepreneurial ecosystem	In downtown Binghamton, Johnson City and Endicott	Coordinated by Planning Department with local partners and BCIDA	Within 1 Year	No additional cost, Refocus existing resources
Use our low cost housing to attract and retain entrepreneurs and innovators	Countywide with a focus on the proposed iDistricts	Planning Department and BCIDA with BU and SUNY Broome	Within 3 Years	Refocus existing efforts
Develop meeting places for entrepreneurs and innovators to share ideas	Within the proposed iDistricts	Planning Department with BU and SUNY Broome	Within 5 Years	No or limited cost if existing facilities are used.
Consider celebrating new ideas through business plan competitions	Countywide	BCIDA with STEP and local development corporations	Within 3 Years	BCIDA
Facilitate ready access to business mentors	Countywide	BCIDA with STEP and local development corporations	Within 1 Year	No cost
Develop and sustain a business retention program	Countywide	BCIDA with STEP and local development corporations	Within 1 Year	No or limited cost
Develop and maintain a database of all Broome County employers with more than 10 employees	Countywide	Planning and BCIDA	Within 1 Year	No or limited cost
Engage in ongoing communication with employers to inform them of resources and obtain feedback on specific needs	Countywide	BCIDA with STEP and local development corporations	Continue Effort	No or limited cost
Establish a proactive team to develop resources to support business growth and address business issues. This may include economic development officials, workforce development staff, commercial brokers, bankers and representatives of funding agencies.	Countywide	BCIDA with STEP and local development corporations	Within 1 Year	No or limited cost
Establish and strengthen relationships with senior officials of major employers that are not headquartered in Broome County	Countywide	BCIDA	Continue Effort	No or limited cost
Publicize economic development activities internally and externally	Countywide	BCIDA	Continue Effort	Refocus existing efforts
Raise the awareness of local entrepreneurs and innovators	Countywide	Partnership with BCIDA, local media, educational institutions, STEP, AM&T, SCORE and others	Within 3 Years	No or limited cost

Vision Item 9: Investing In Our Workforce, Entrepreneurship and Innovation

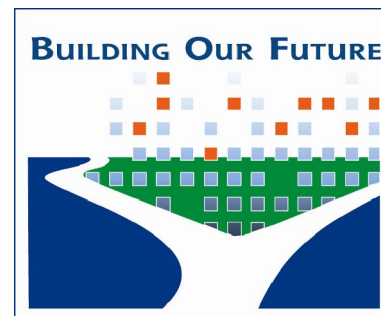
What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Establish and maintain a quarterly e-newsletter regarding economic development activities	Countywide	Planning Department with BCIDA, STEP and local development corporations	Within 1 Year	No or limited cost
Support entrepreneurs and innovators	Countywide	Planning Department with BCIDA, STEP and local development corporations	Within 1 Year	CDBG MicroEnterprise Program, REDC funds and Refocus existing resources
Investigate establishing a venture fund for start up companies being created at SUNY Broome and BU	Countywide	BCIDA	Within 5 Years	No or limited cost to investigate feasibility
Pursure funding opportunities for microenterprise grants and other mechanisms to support entrepreneurs and innovators	Countywide	Planning Department with BCIDA, STEP and local development corporations	Within 1 Year	CDBG MicroEnterprise Program, REDC funds and Refocus existing resources
Develop a business attraction program	Countywide	Planning Department with BCIDA, STEP and local development corporations	Within 1 Year	No additional cost, Refocus existing resources
Invite site selectors and major commercial brokerages for a paid familiarization visit	Countywide	BCIDA	Within 3 Years	BCIDA
Engage site selectors to speak at regional economic development meetings	Regionwide	BCIDA	Within 3 Years	No or limited cost
Develop, maintain, and distribute an up to date marketing profile	Countywide	BCIDA	Within 1 Year	BCIDA
Establish and maintain a single economic development portal with up to date marketing information, links to resources, and additional points of contact	Countywide	Planning and BCIDA	Within 1 Year	BCIDA
Include significant available sites and buildings with all development related data linked to the County's www.bcgis.com	Countywide	Planning and BCIDA	Within 3 Year	No cost
Develop and sustain a social media campaign targeted at employers, site selectors, educators, entrepreneurs, and other stakeholders	Countywide	Planning and BCIDA	Within 1 Year	No cost
Organize a 'Mini-Maker's Faire' or similar event for adults to build on success of DaVinci Festival.	Countywide	Planning and select educational institution or non-profit	Within 1 Year	No or limited cost

Vision Item 9: Investing In Our Workforce, Entrepreneurship and Innovation

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Support the Center for Technology & Innovation	CT&I site on State St in Binghamton	Planning Department	Continue Effort	No cost
Work with municipal officials to develop an up to date inventory of sites in the urban core, in nearby towns, and near interstates that have the best development potential	Countywide with focus on sites that have access to existing infrastructure	Planning and BCIDA	Within 1 Year	No or limited cost
Maximize the use of the Broome Corporate Park by acquiring and aggregating properties for future expansions.	Broome Corporate Park	BCIDA	Within 3 Years	BCIDA
Initiate the NYS Shovel Ready Certification process for 1 or 2 sites.	Broome Corporate Park, Emerson Business Park and other select locations	Planning and BCIDA	Within 1 Year	No or limited cost
Aggressively work to aquire, aggregate and investigate/remediate and prepare brownfield sites for redevelopment.	Focus on key gateways and urban core	Planning and Broome County Land Bank	Continue Effort	EPA Assessment and Clean Up Grants, Office of Attorney General Community Revitalization Initiative
Work with Binghamton University and SUNY Broome to identify building space which meets the criteria of the START-UP NY program.	START-UP NY eligible areas, focus on proposed iDistricts	BCIDA, Planning, BU and SUNY Broome	Within 1 Year	No or limited cost
Continue focused promotion of site with the highest level of readiness.	Key development parcels	BCIDA	Continue Effort	No or limited cost
Develop a strategy to align properties with companies expected to graduate from the proposed high technology incubator.	Countywide with focus on iDistricts	Planning and BCIDA	Within 5 Years	No or limited cost
Consider offering incentives for the redevelopment of vacant and underutilized sites. This can include financial incentives and streamlined permitting.	Focus on iDistricts and key gateways	Broome County, BCIDA with local development corporations	Within 3 Years	Broome County Solid Waste (through tipping fee waiver), BCIDA, and local development corporations

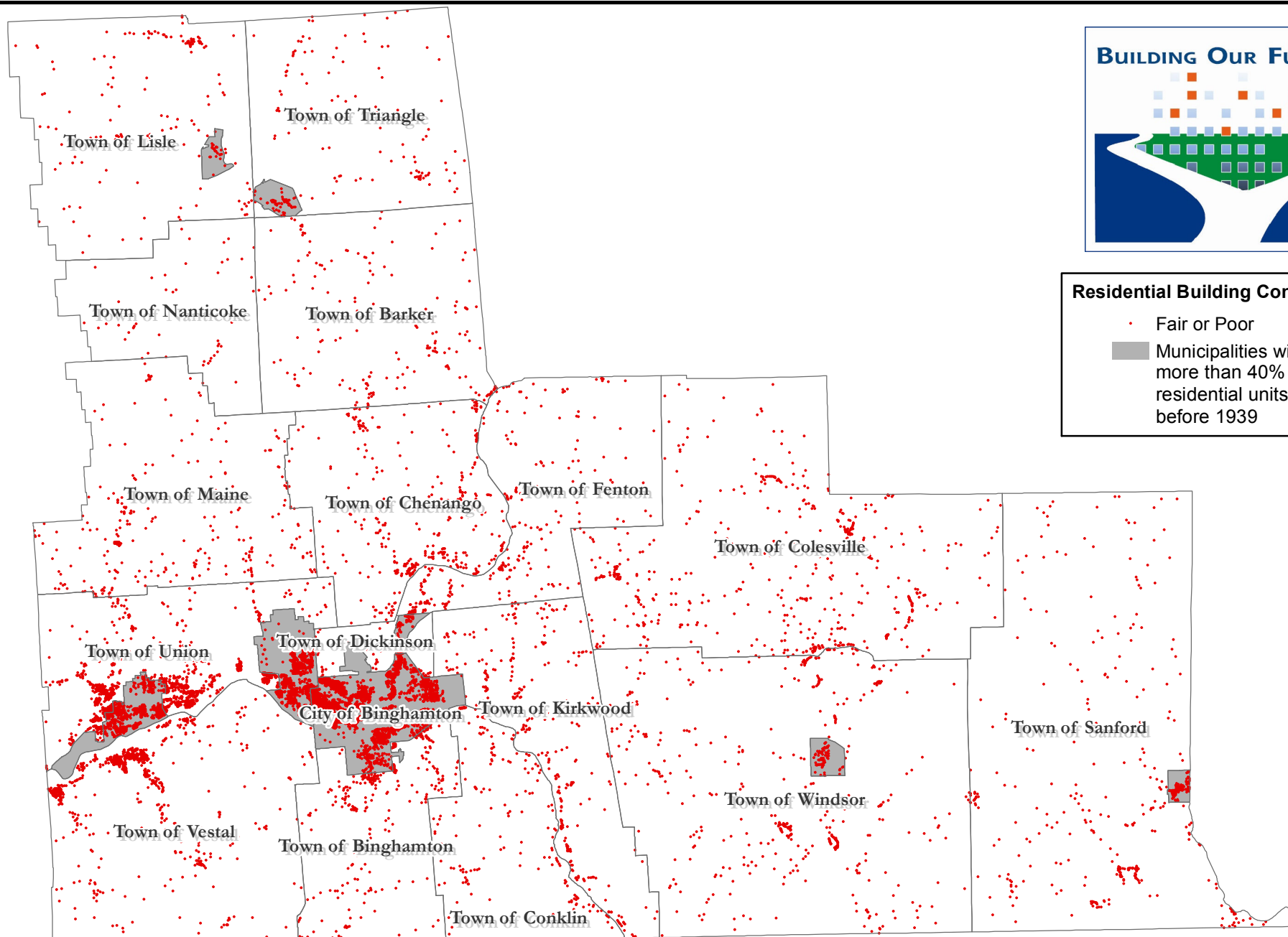
Vision Item 9: Investing In Our Workforce, Entrepreneurship and Innovation

What We Will Do	Where Will We Do This	Who Will Do it	When Will They Start	Other Funding Sources
Connect businesses to NYSERDA and other programs which increase energy efficiency and lower the cost of utilities.	Countywide	Broome County Office of Energy Development	Continue Effort	No cost



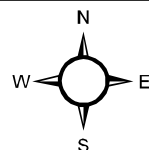
Residential Building Condition

- Fair or Poor
- Municipalities with more than 40% of residential units built before 1939



Broome County Comprehensive Plan – Building Our Future

Residential Building Condition



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
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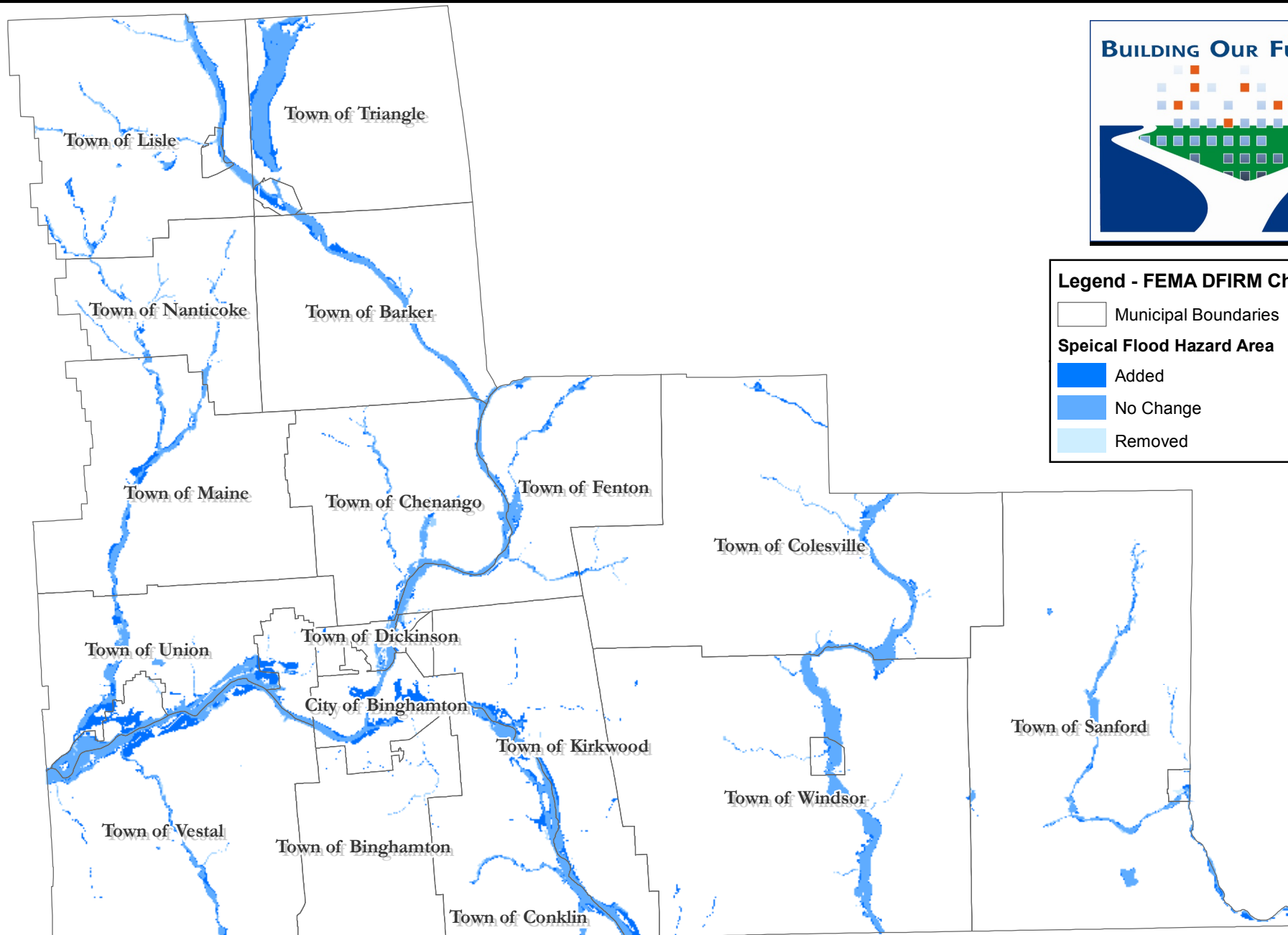
Map created May 1, 2013
 By Douglas English

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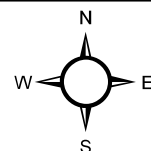
Legend - FEMA DFIRM Changes

-  Municipal Boundaries
- Speical Flood Hazard Area**
 -  Added
 -  No Change
 -  Removed



Broome County Comprehensive Plan – Building Our Future

FEMA DFIRM Changes



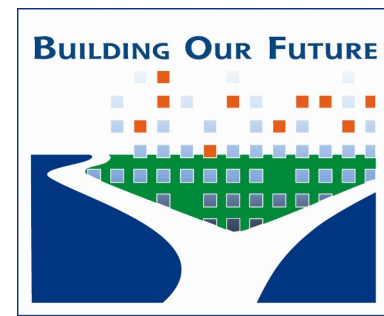
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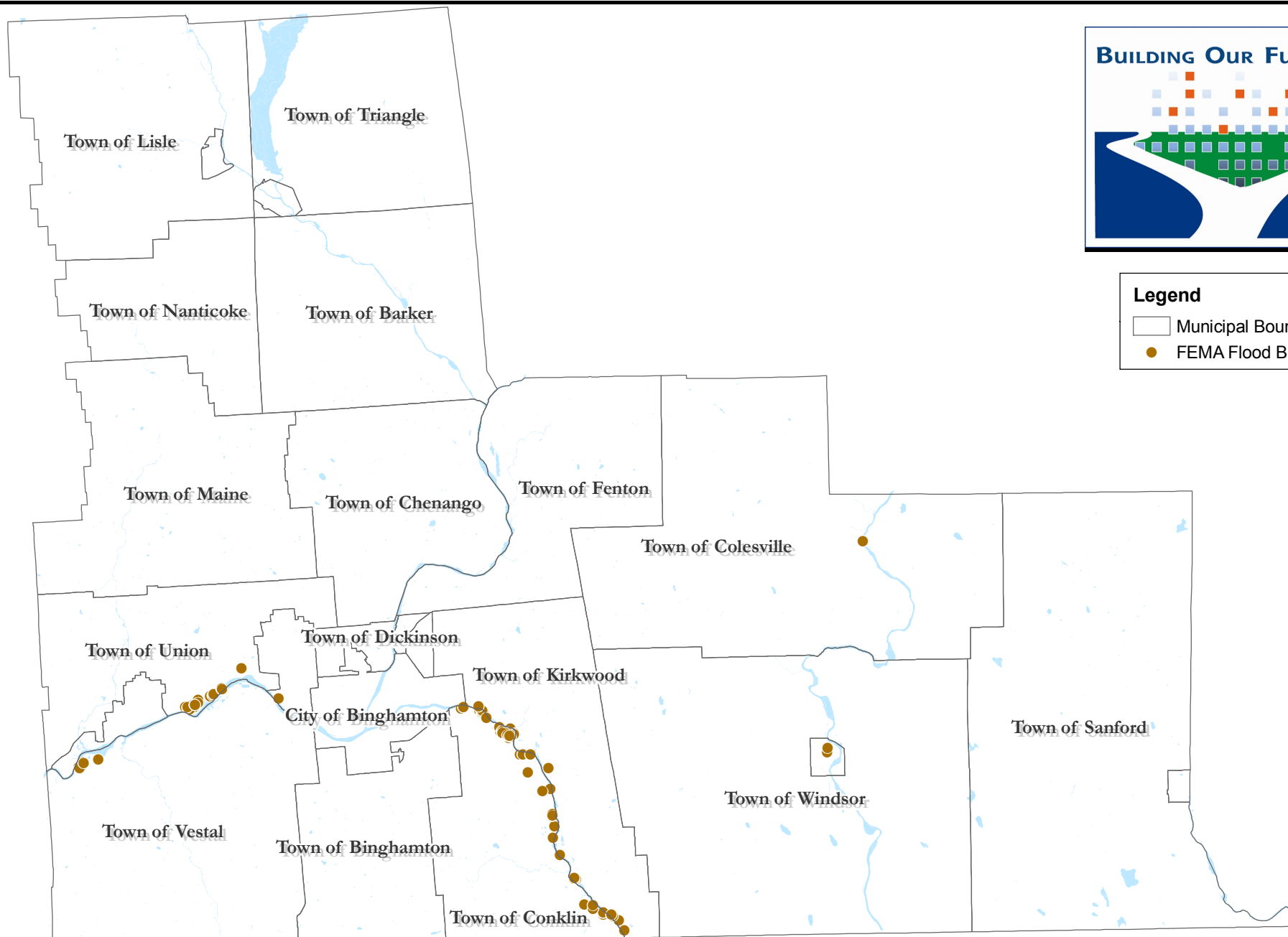
Map created November 20, 2012
 By Joseph Gaynor

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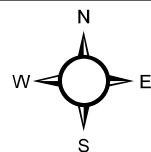
Legend

-  Municipal Boundaries
-  FEMA Flood Buyouts



Broome County Comprehensive Plan – Building Our Future

FEMA Flood Buyouts

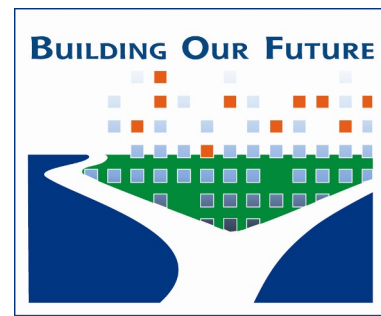


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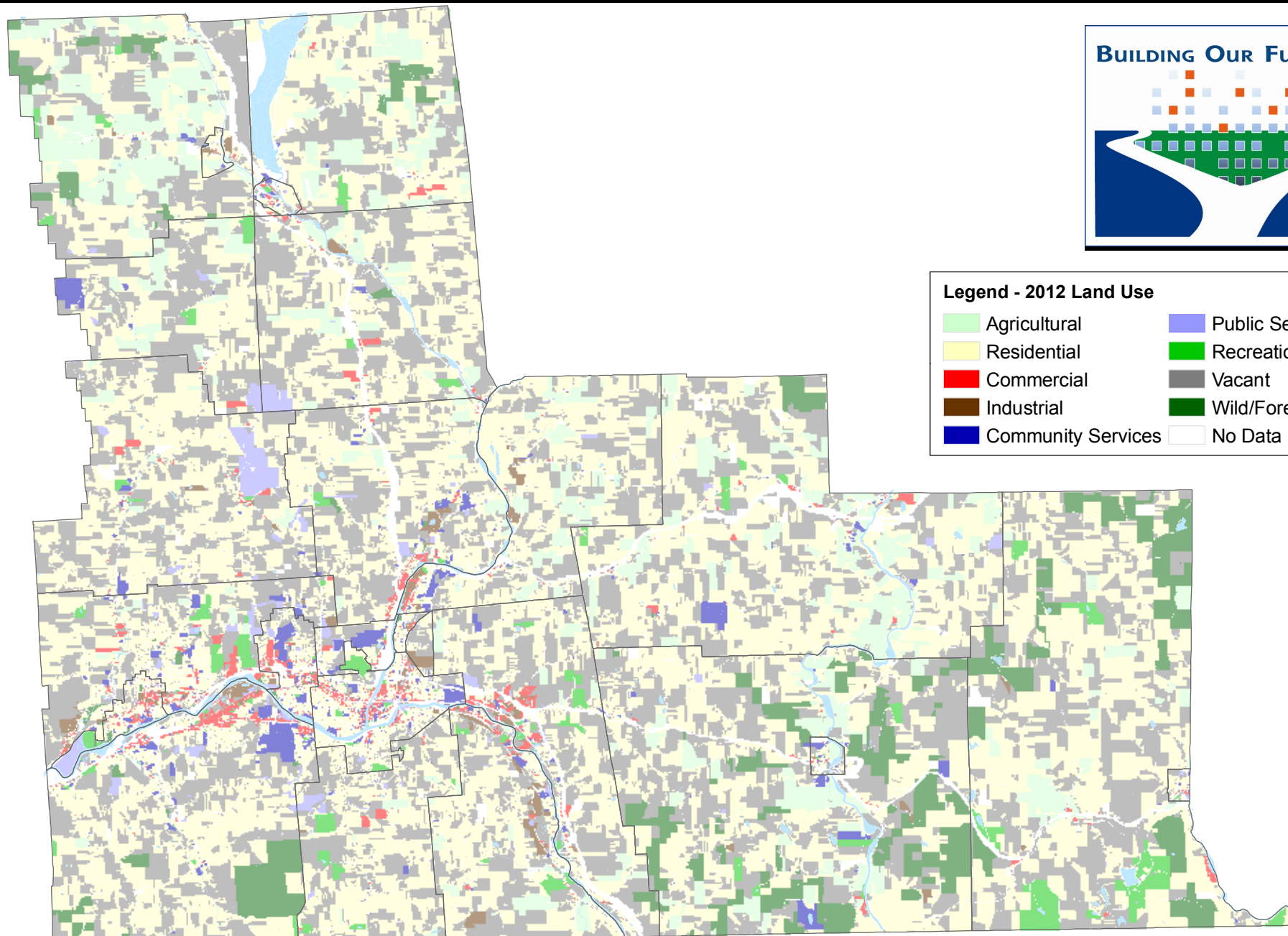
Map created December 5, 2012
 By Joseph Gaynor

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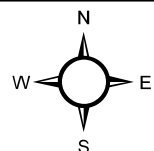
Legend - 2012 Land Use

Agricultural	Public Services
Residential	Recreational
Commercial	Vacant
Industrial	Wild/Forest
Community Services	No Data



Broome County Comprehensive Plan – Building Our Future

2012 Countywide Land Use

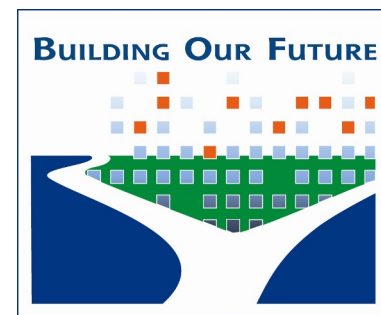


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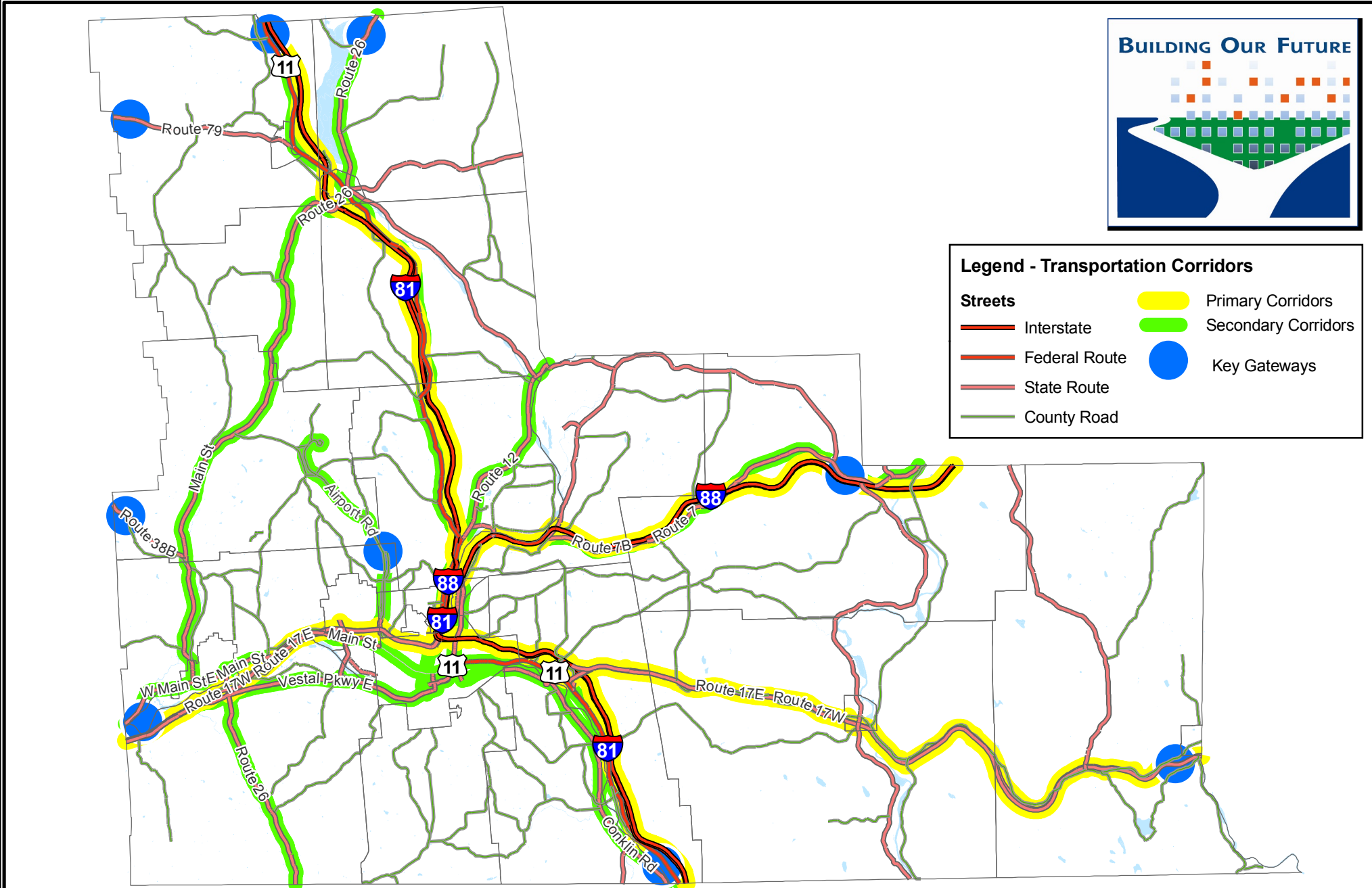
Map created October 23, 2012
 By Joseph Gaynor

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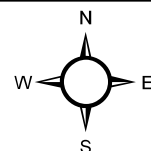
Legend - Transportation Corridors

- | | | |
|----------------|-------------------|--------------------------|
| Streets | | Primary Corridors |
| Interstate | Primary Corridors | Secondary Corridors |
| Federal Route | Key Gateways | |
| State Route | | |
| County Road | | |



Broome County Comprehensive Plan – Building Our Future

Transportation Corridors



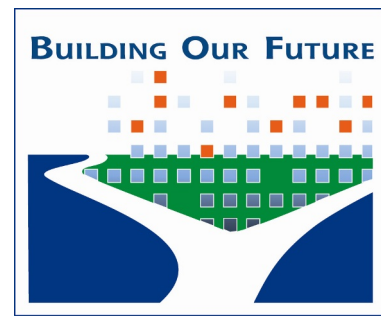
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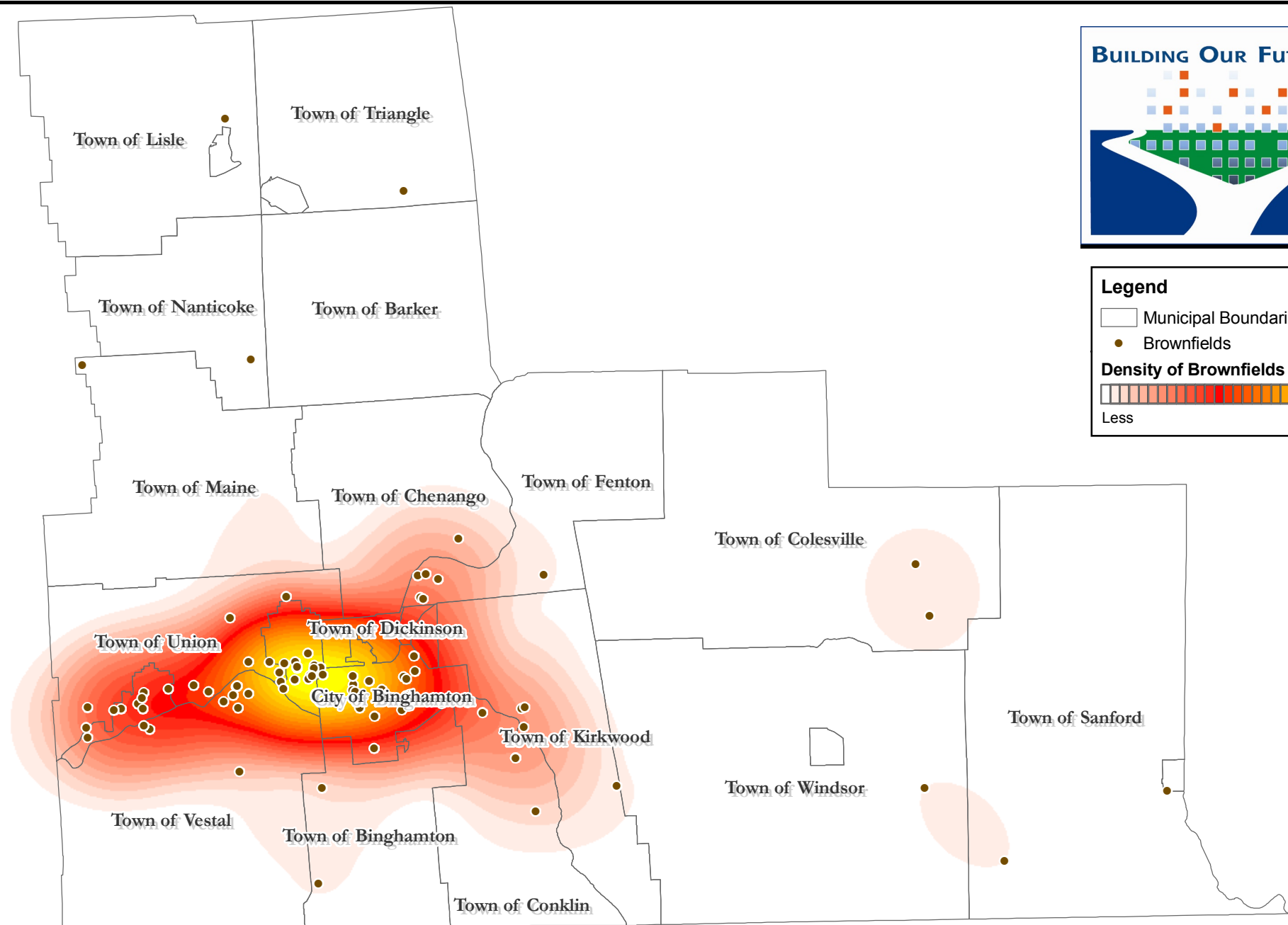
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By Joseph Gaynor

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Legend

Municipal Boundaries
 Brownfields
Density of Brownfields
 Less More

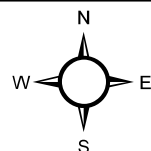


Broome County Comprehensive Plan – Building Our Future

Brownfields

Broome County, New York

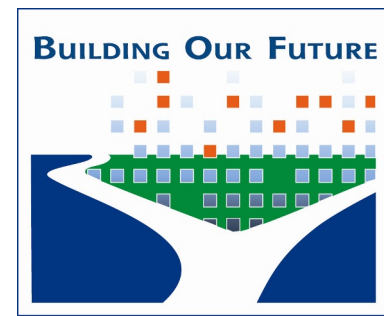
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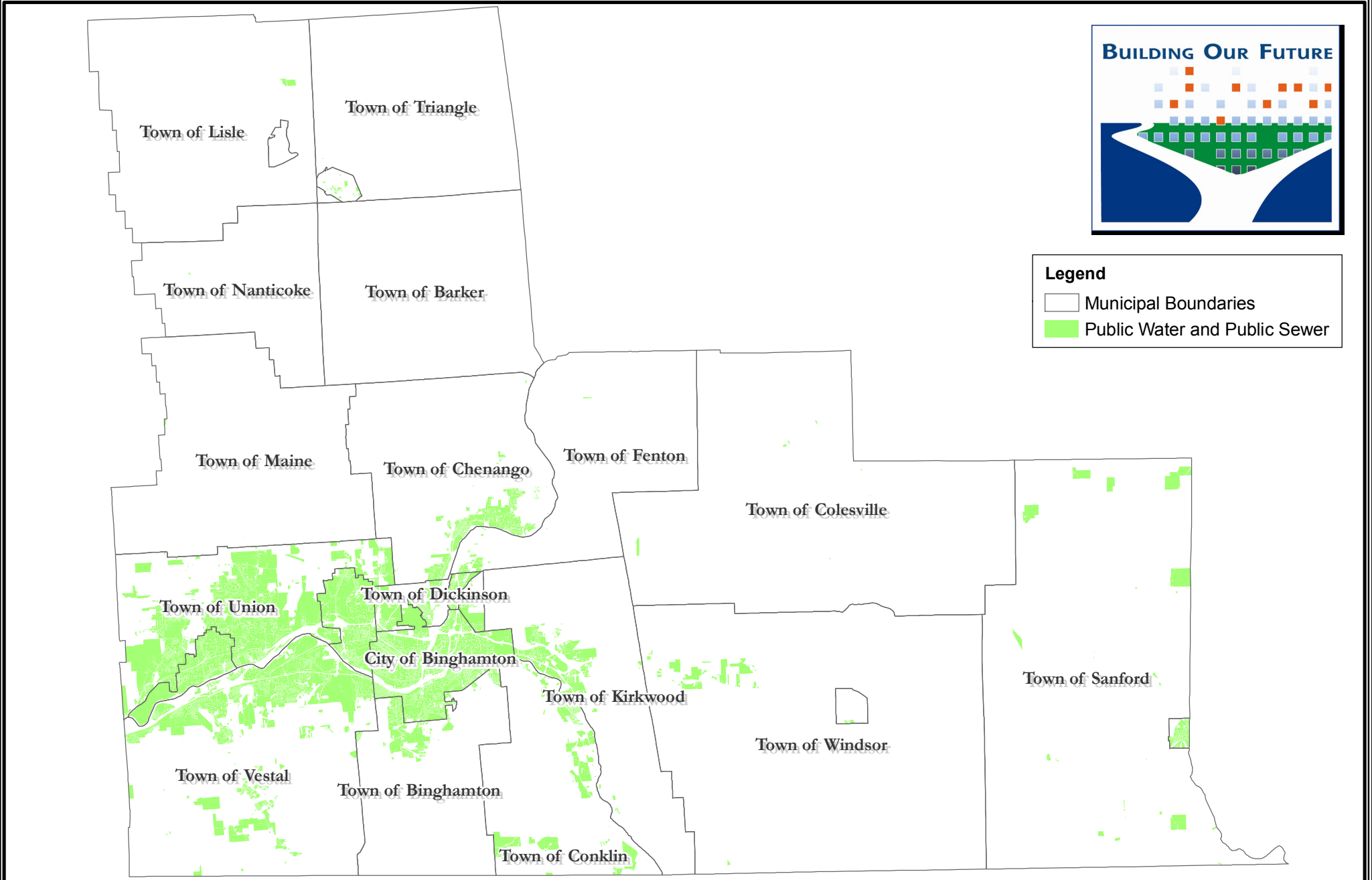
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Map created November 20, 2012
 By Joseph Gaynor



Legend

- Municipal Boundaries
- Public Water and Public Sewer



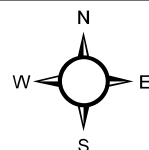
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Public Water and Public Sewer

Broome County, New York



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www.bcgis.com

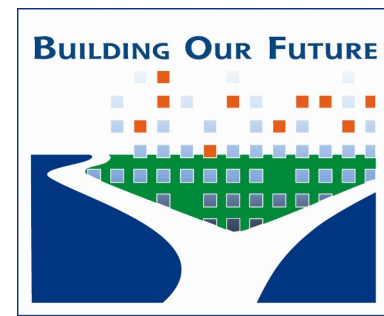


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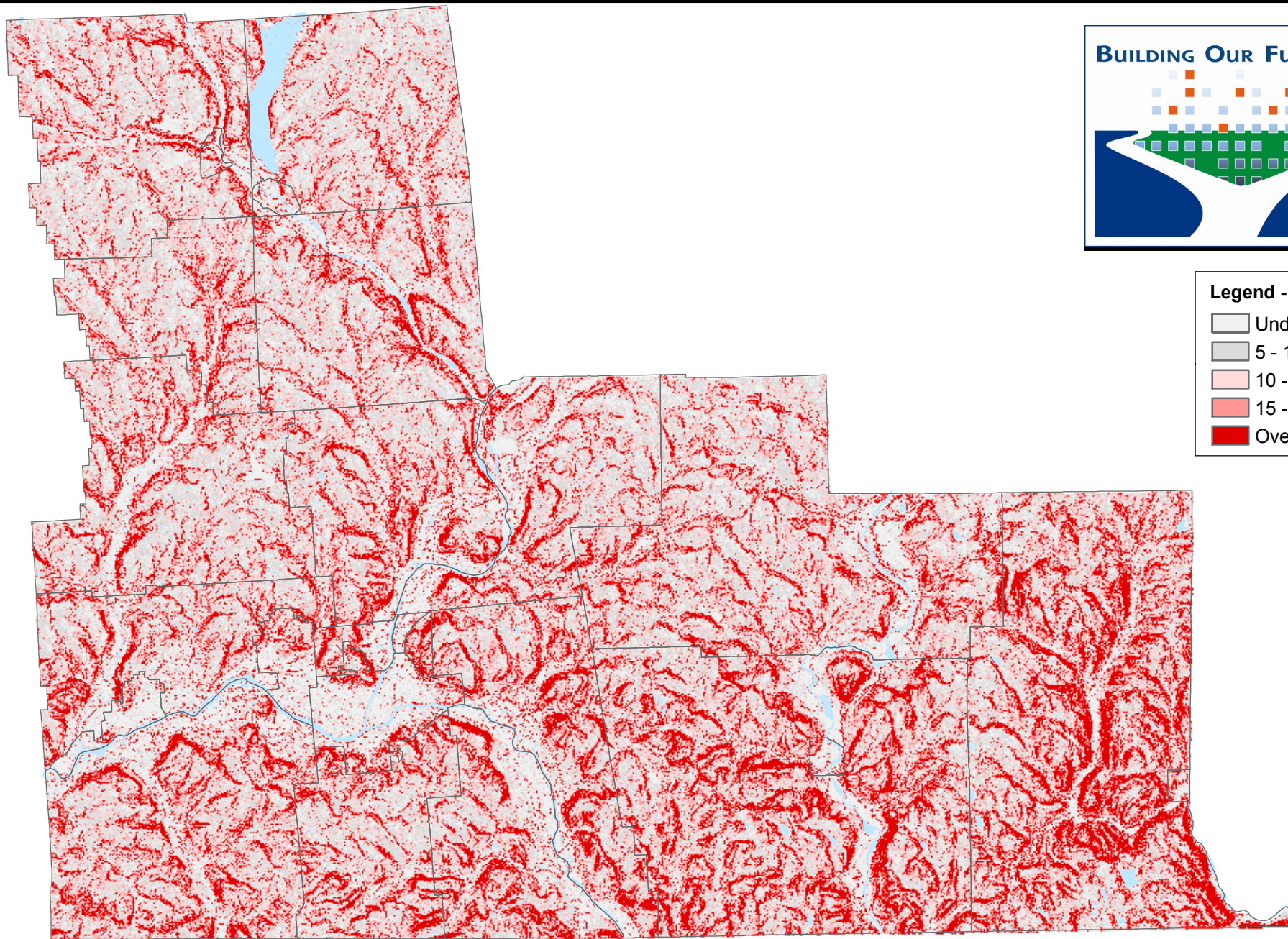
Map created November 6, 2012
 By Joseph Gaynor

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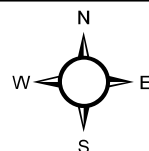
Legend - Slope

-  Under 5%
-  5 - 10%
-  10 - 15%
-  15 - 20%
-  Over 20%



Broome County Comprehensive Plan – Building Our Future

Slope



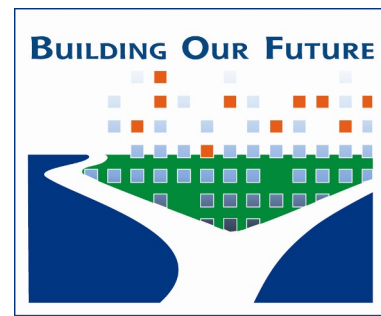
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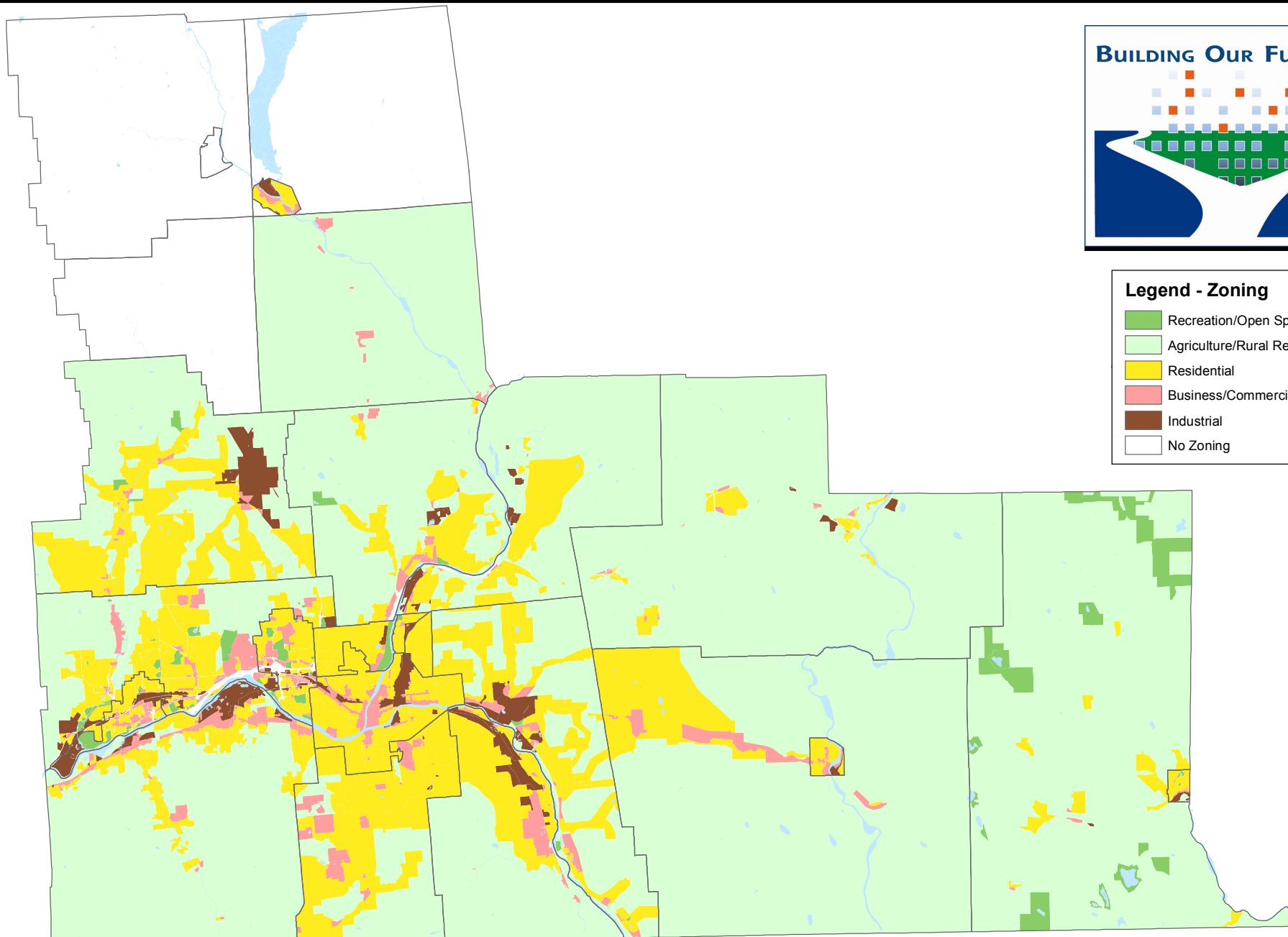
Map created November 6, 2012
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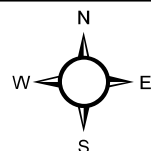
Legend - Zoning

- Recreation/Open Space
- Agriculture/Rural Residential
- Residential
- Business/Commercial
- Industrial
- No Zoning



Broome County Comprehensive Plan – Building Our Future

Countywide Zoning



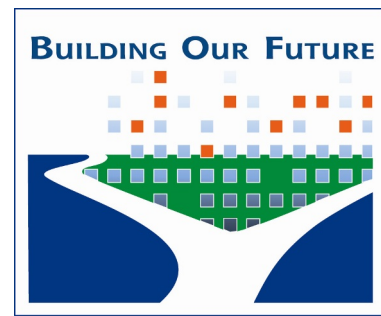
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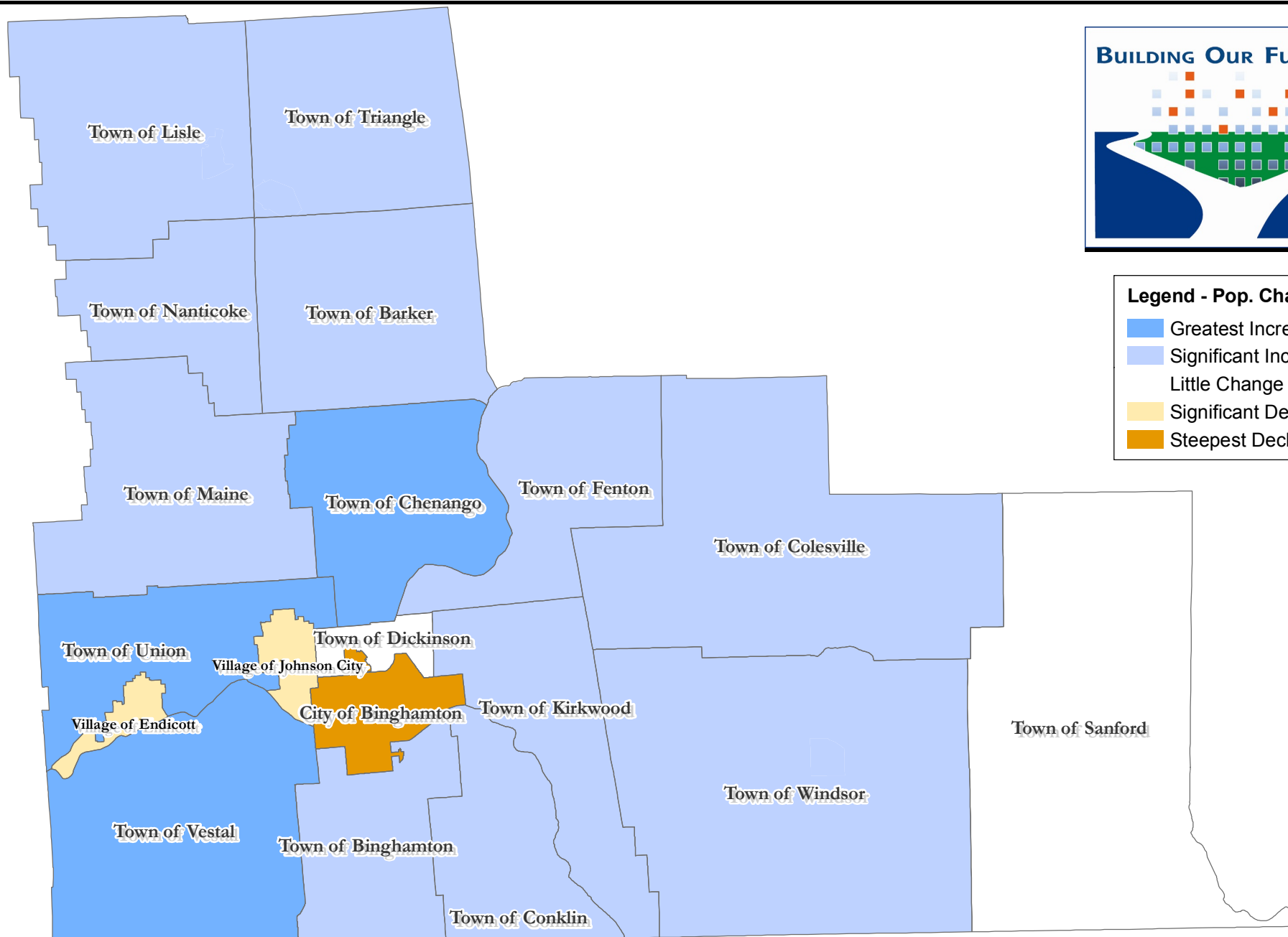
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By Joseph Gaynor

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Legend - Pop. Change

- Greatest Increase
- Significant Increase
- Little Change
- Significant Decline
- Steepest Decline



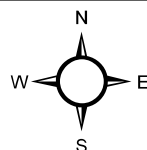
Broome County Comprehensive Plan – Building Our Future

Population Change from 1950 to 2010: Broome County Municipalities



Broome County, New York

GIS
www.bcgis.com



0 15,000 30,000 45,000 60,000 Feet
1 inch equals 22,500 Feet when printed on 8.5" x 11" media

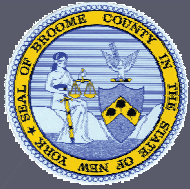
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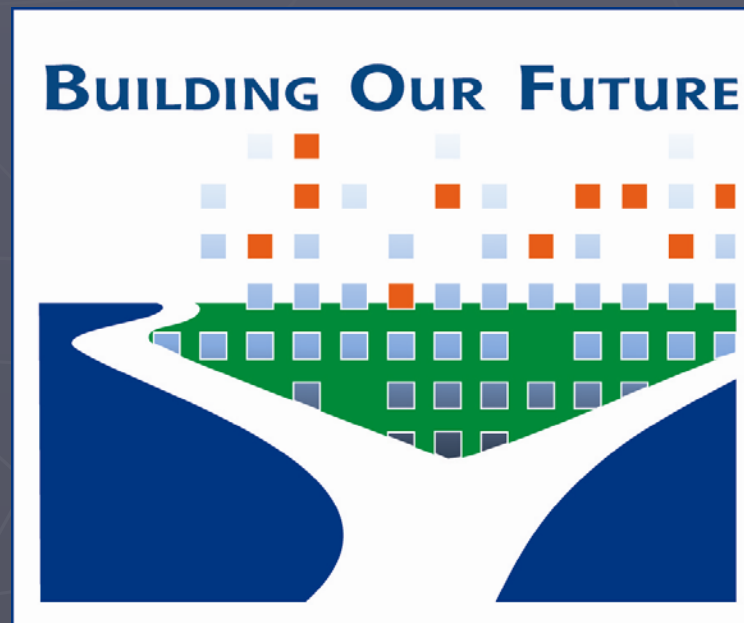
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Binghamton, New York 13901 Fax: 607-778-2175

Map created April 9, 2013
By Joseph Gaynor

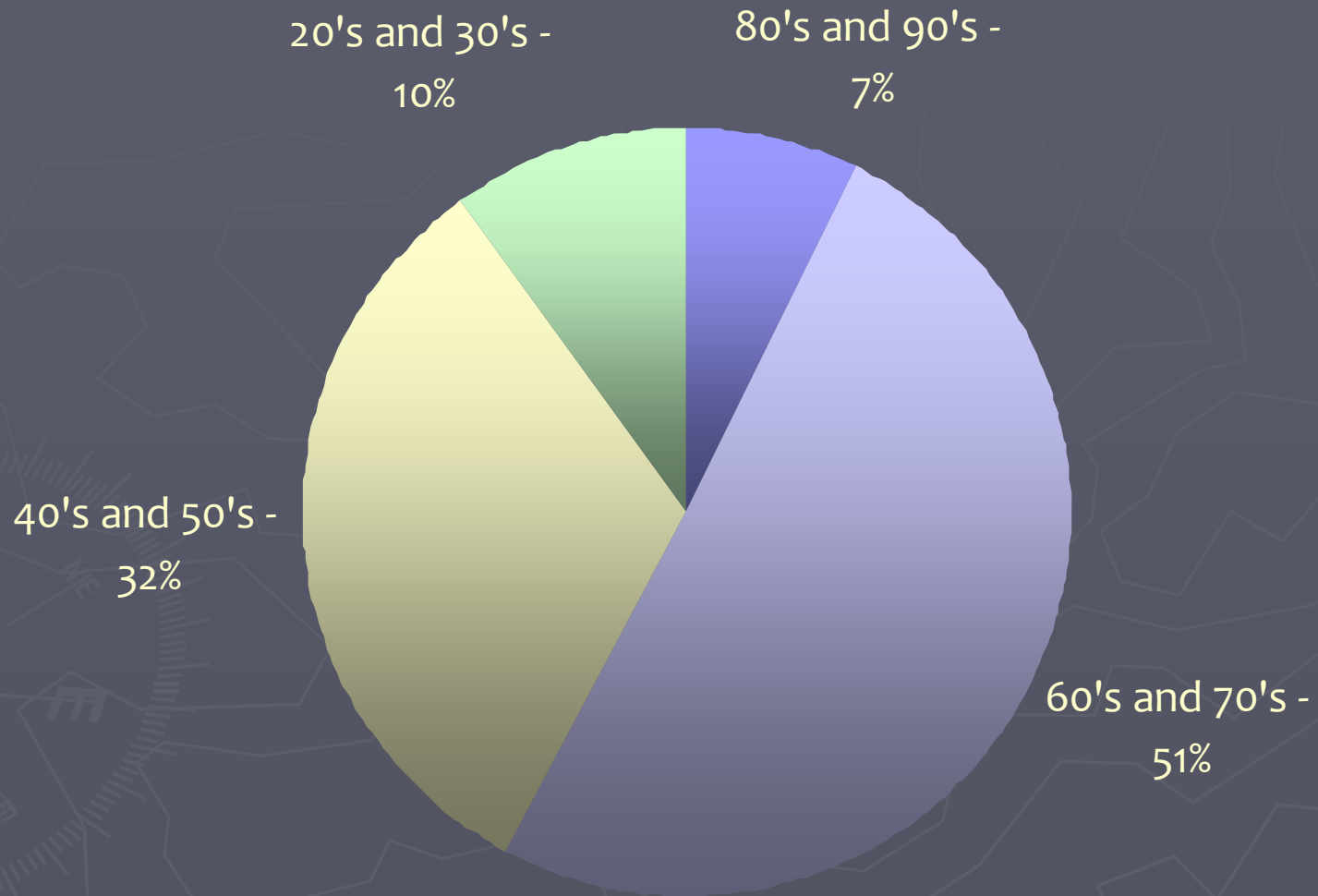
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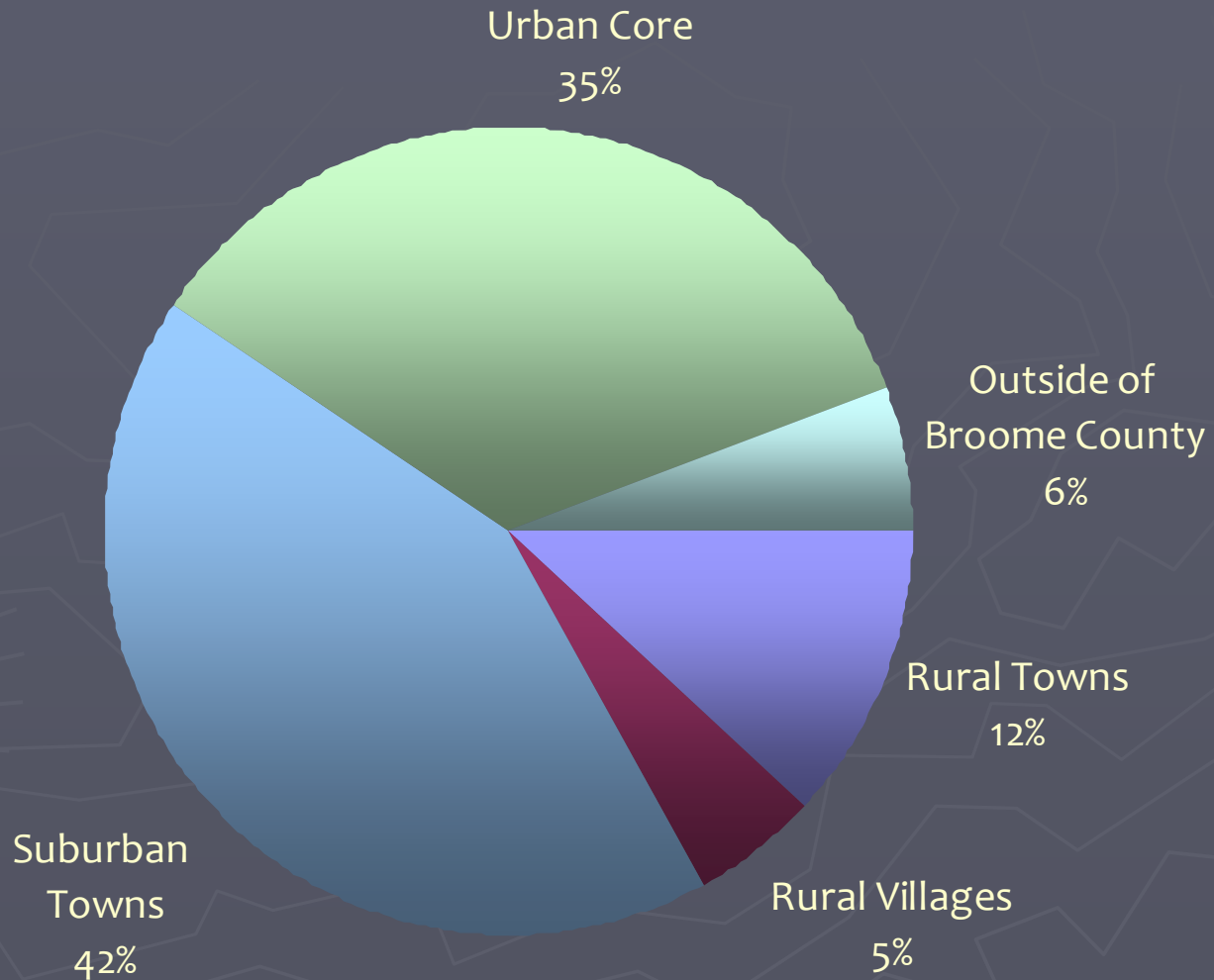
Broome County Department of Planning and Economic Development



Age of Respondents



Location of Respondents



Survey



1. Ten years from now I want Broome County to be more:

Prosperous	14%
Safe	11%
Productive	9%
Affordable	9%

Survey



2. Ten years from now, what sectors of the Broome County economy would you like to see have the most jobs:

Research and Innovation	15%
Clean and Green Technology	13%
Manufacturing	13%
Education	13%

Survey



3. How would you allocate limited resources?

Maintaining our roads, bridges, and infrastructure	17%
Providing more incentives for entrepreneurs and small business owners	13%
Protecting our environment	12%
Protecting farms and agriculture	11%

Survey



4. There are obstacles to achieving the vision for Broome County. Please rank these obstacles to achieving our vision:

Increasing taxes	68%
Residents leaving the area	66%
Potential future flooding	52%
Too many layers of government	50%

Survey



5. We have a wealth of opportunities here. Please rank these opportunities to help achieve our vision:

Working with local businesses to help them expand	67%
Better utilizing local colleges for economic development	65%
Recruiting firms from outside the area to locate here	62%
Encouraging people to buy local products and foods	61%

Survey



6. Which of the following elements would you like to see more often with new development:

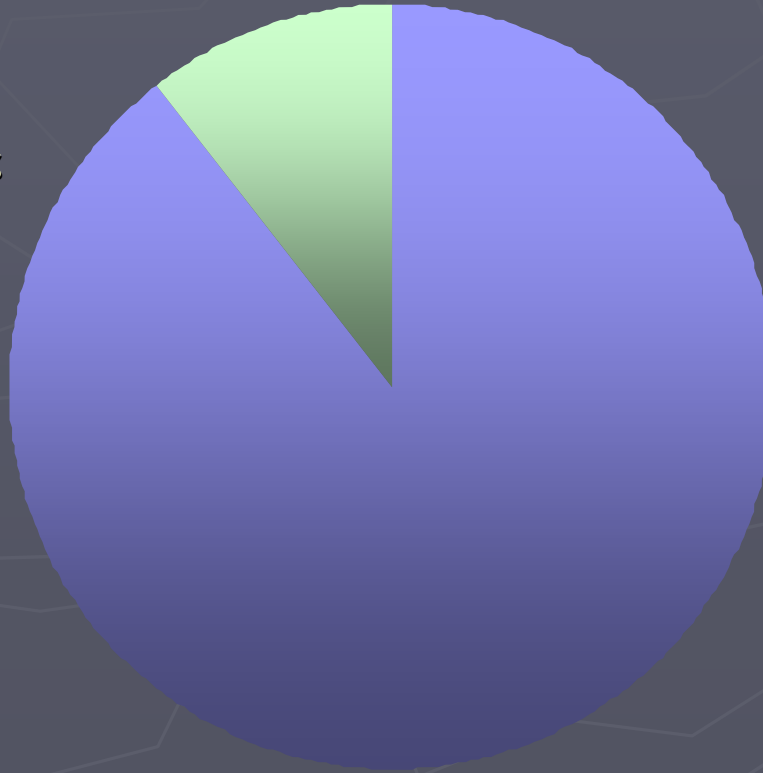
Including pedestrian and bicycle amenities such as convenient sidewalks, benches and bike racks	27%
Providing landscaping on commercial projects	22%
Using smaller building lots and reserved areas for green space on residential subdivisions	18%
Using exterior materials like stone face or wood siding instead of cinder block	14%

Survey



7. Where should County decision makers encourage development:

Extend water and sewer lines and major roads to expand development outside of the Triple Cities – 11%

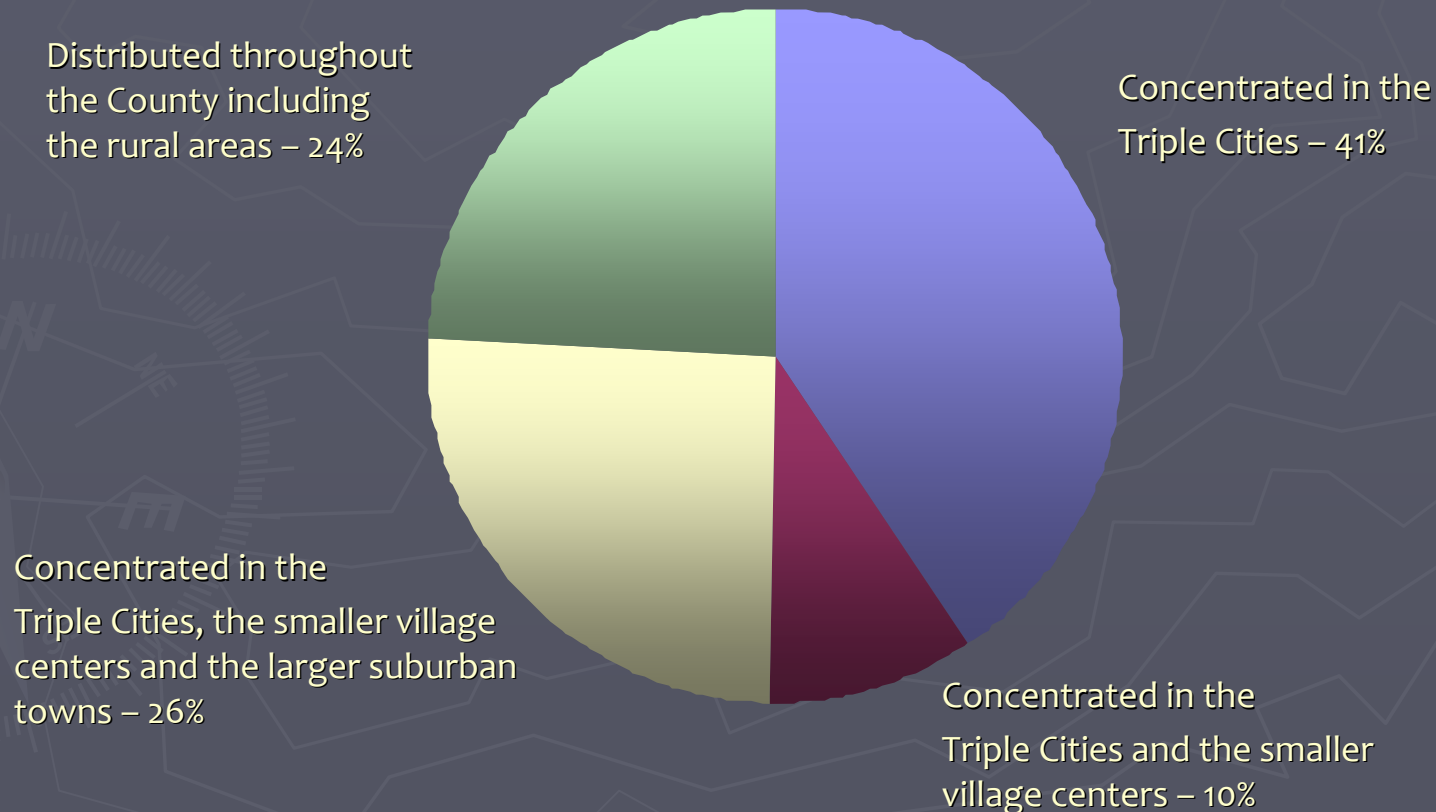


Concentrate infrastructure projects in the Triple Cities – 89%

Survey



8. Where would you like to see the majority of new **commercial** or **industrial** development take place:



Survey



9. Where would you like to see the majority of new **residential** development take place:

